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March, 1953

SOAP and Sanitary Chemicals

In this issue...

Compounded detergents varied to meet surface conditions

• • •

Sanitary chemical showroom in trailer rolls to buyer's door

• • •

Metal polishes — formulation trends for household products

• • •

Cleaning materials for newest sea queen—S. S. United States

Cover photo . . . Martin J. Peters, vice-president of Moore Brothers Co., New York, and president of the National Sanitary Supply Assn. holding 30th annual trade show and convention at the Conrad Hilton Hotel, Chicago, Mar. 22-25. Details on p. 145.

Repackers!
Compounders!
Blockmakers!

LOOKING FOR A BETTER QUALITY PARA?

SOLVAY® PARA-DICHLOROBENZENE

Gives You All these Advantages ✓

- ✓ Better Appearance
- ✓ High Purity
- ✓ Better Color
- ✓ Ability to Form Better and Easier
- ✓ Better Crystals

New exclusive production methods now enable Solvay to offer premium quality Para at no increase in cost. We would like to show you samples of this superior product in the various granulations for repacking, pressing and compounding.

SOLVAY PROCESS DIVISION
Allied Chemical & Dye Corporation
61 Broadway, New York 6, N. Y.

BRANCH SALES OFFICES:
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Houston • New Orleans • New York • Philadelphia • Pittsburgh
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Soda Ash • Caustic Soda • Calcium Chloride • Caustic Potash • Potassium Carbonate • Sodium Bicarbonate • Ammonium Bicarbonate
Specialty Cleansers • Sodium Nitrite • Para-dichlorobenzene • Ortho-dichlorobenzene • Monochlorobenzene • Ammonium Chloride • Chlorine

Why NEW is so important to YOU

. . . and why—for your own best interests—you should write Fuld Brothers for important information

You are doing business in a chemical age. What is startling new today—can be ancient as Adam tomorrow. Constant research—in the laboratory and in the field—by Fuld Brothers' staff assures you the opportunity of keeping abreast and *ahead* of your competition.

Write for important information about What's New in . . .

- **WAXES**
  Latest developments in the field.
- **FLOOR FINISHES**
  A Fuld accomplishment. Available in limited quantities.
- **CLEANERS**
  . . . that keep sales way up!
- **HAND SOAPS**
  Newest Fuld advances now give you a stronger competitive selling argument. Learn the facts.
- **LIQUID DUST CONTROL**
  Develop new business with these easy to sell products. Find out how to sell 'em. Where to sell 'em.
- **DISHWASHING COMPOUNDS**
  A new proven way to get a big chunk of this profitable market.
- **DETERGENTS**
  Formulas that demonstrate to your customers that you have exactly what they need.
- **BOWL CLEANERS**
  A low priced-high quality product containing newly developed TORX.

FULD BROTHERS, INCORPORATED
MANUFACTURING CHEMISTS
Warehouses in Principal Cities
CONSISTENT QUALITY FOR OVER A QUARTER CENTURY
702-710 S. WOLFE ST., BALTIMORE 31, MD.
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IMPROVED

ANNOUNCING NEW, IMPROVED SANTOMERSE No. 1

FASTER WETTING
BETTER SUDSING
IMPROVED SURFACE ACTIVITY

Why not see for yourself all of the new, sales-building features of improved Santomerse No. 1? Write your nearest sales office for a sample or information on prices and delivery. MONSANTO CHEMICAL COMPANY, Phosphate Division, 1700 South Second Street, St. Louis 4, Missouri

Santomerse: Reg. U. S. Pat. Off.

DISTRICT SALES OFFICES: Birmingham, Boston, Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Los Angeles, New York, Philadelphia, Portland, Ore., San Francisco, Seattle, Twin Cities. In Canada, Monsanto Canada Limited, Montreal.

MONSANTO
CHEMICALS AND PLASTICS

SERVING INDUSTRY... WHICH SERVES MANKIND

SOAP and Sanitary Chemicals

Volume XXIX, No. 3 March, 1953

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Publisher
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Publication Office:
254 W. 31 St., New York 1, N. Y.

Chicago Office:
333 N. Michigan Ave.

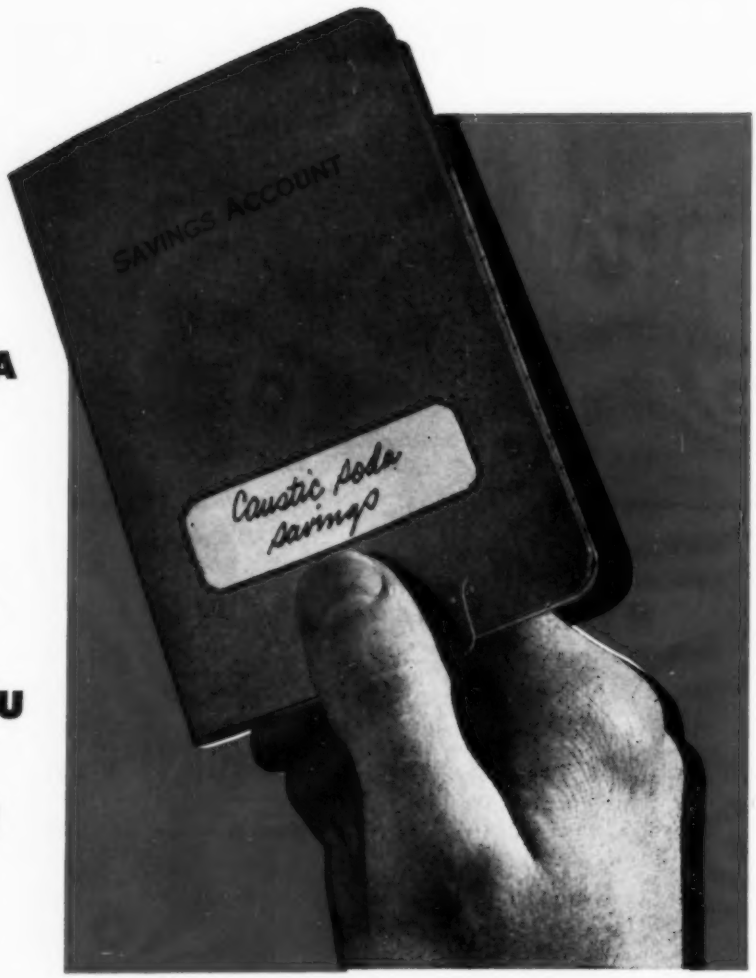
Subscription rates: U. S., $4.00 per year; Canadian, $5.00; Foreign, $6.00. Copy closing dates—22nd of month preceding month of issue for reading matter and 10th of month preceding month of issue for display advertising. Entered as second-class matter June 16, 1949, at the Post Office, New York, N. Y., under the act of March 3, 1879.

IF YOU ARE A USER OF 50% CAUSTIC SODA

WOULD YOU INVEST $2,120 IF IT COULD SAVE YOU

$20,979

IN FIVE YEARS?



THIS CUSTOMER DID BY SIMPLY SWITCHING TO 73% CONCENTRATION

This is an actual case of a bleach manufacturer located in the south. It is by no means an exceptional experience. Naturally, the volume of caustic soda consumed determines the savings realized in switching from 50% to 73% concentration.

In 1952, this bleach manufacturer purchased 630 anhydrous tons of Columbia-Southern 73% caustic which cost $45,246.60 delivered.

If this customer had continued to buy the 50% liquor, it would have cost $49,442.40. A savings of $4,195.80 was realized the first year. In five years this amounts to $20,979.00. And of course the savings do not stop at the end of five years; they go on and on.

The total cost of equipment and installation necessary to effect these savings ran $2,120. We believe it will pay you as it did this customer to seriously investigate switching from 50% to 73%.

The unloading method used with 73% is a compact unit that combines unloading and diluting in a single operation.

Columbia-Southern's technical staff will be glad to make recommendations regarding the cost and location of this unit. Also, they will help you with the unloading of the initial shipment.

Write our Pittsburgh office to determine if your plant location offers you this opportunity for potential savings.

COLUMBIA-SOUTHERN
CHEMICAL CORPORATION
SUBSIDIARY OF PITTSBURGH PLATE GLASS COMPANY

EXECUTIVE OFFICES: FIFTH AVENUE AT BELLEFIELD, PITTSBURGH 13, PA. DISTRICT OFFICES: BOSTON • CHARLOTTE • CHICAGO • CINCINNATI • CLEVELAND DALLAS • HOUSTON • MINNEAPOLIS • NEW ORLEANS • NEW YORK • PHILADELPHIA • PITTSBURGH • ST. LOUIS • SAN FRANCISCO

just push this "button" to

sanitize your premises

it releases

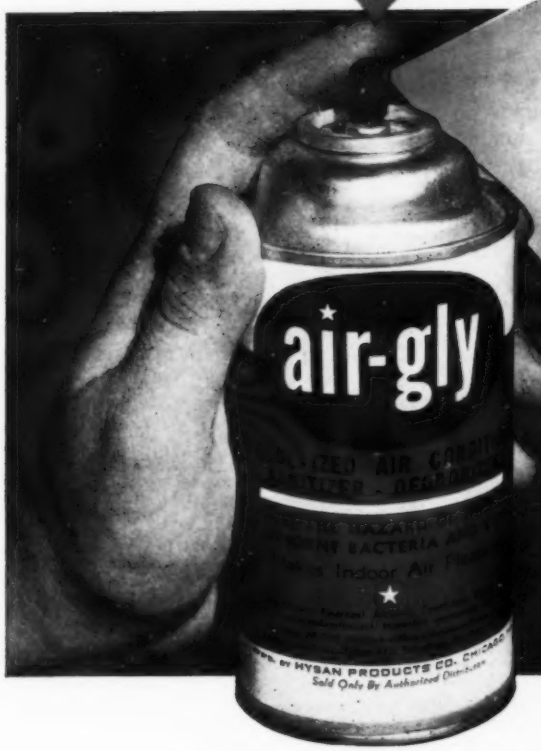
★ air-gly's

delightfully fragrant

AEROSOL

disinfectant and

odor killer



A 4-second AIR-GLY spray permeates every sector of the room in HOMES • OFFICES • FACTORIES • INSTITUTIONS • SCHOOLS • THEATRES • CAFES etc., etc.

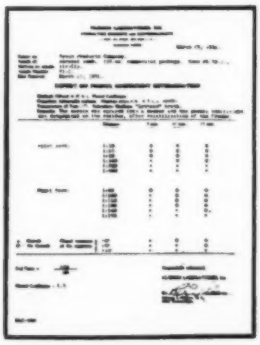
SAFE, pleasant AIR-GLY not only aids in destroying air-borne germs but actually eliminates many odors because it *destroys* the bacteria that *cause* them. Don't confuse it with ordinary deodorizers that don't kill bacteria. AIR-GLY *does* —see report at left.

Don't Mask These Odors — *Destroy Them — with AIR-GLY*

GARLIC	SMOKE	PERSPIRATION
CABBAGE	LIQUOR	DISEASE
ONIONS	BATHROOM	PUTREFACTION
FISH	CLOSET	

Helps reduce sickness, absenteeism. Improves working conditions.

This Report Shows that AIR-GLY Has Germ-Killing Value . . . Send For Copy!



Attention Jobbers: Send for case of twelve Air-Gly's. Try one. If not thoroughly satisfied, return the remaining 11 for full case credit.

See the HYSAN Exhibit— Booth No. 121-122—
National Sanitary Supply Assn. convention and trade show, Conrad Hilton Hotel, Chicago, March 22 thru 25.

Hysan PRODUCTS CO.

Come In

and visit with us...

Suite 2320
CONRAD HILTON HOTEL

NATIONAL SANITARY SUPPLY ASS'N
TRADE SHOW

Recalling many years of pleasant associatio with our many friends in the industry, we wish to give due recognition to the splendid accomplishments of the National Sanitary Supply Association.

The forthcoming convention and trade show will be the biggest and greatest ever held. It is truly the market place of the industry and the source of lasting friendships and business relationships which will continue to add strength and prestige to your sanitary supply industry.

Please be our guest for as much of your time as possible.

Al Caudy, Jr.

Also—see our display in Booths 110-111

A GUIDE

TO WAX PRODUCTS PURCHASING FOR PRIVATE BRAND RESALE

An honest appraisal of floor wax products as we see it is offered to guide wax buyers who want the best quality money can buy...

SELF POLISHING WAXES

Candy's Supreme (standard)
Candy's DeLuxe
Bright Beauty (standard)
Candy's No. 640
Candy's Supreme Special WR
CAND-DOX #CS
CAND-DOX #BB

Seven floor waxes that *are* all-around top quality for any given traffic condition. Each imparts the finest protection and beauty to floors for which they are best suited.

Bright Beauty FLOOR CLEANER

An outstanding material for removing even the heaviest wax film and dirt.... Brings neglected floors "back to normal." The *right* cleaning agent to insure the most efficient floor maintenance.

Bright Beauty CREAM FURNITURE POLISH

A cream furniture polish that spreads easily, polishes without excessive effort and imparts a deep impressive lustre. Too, it permits *repeated repolishing* with a dry cloth saving reapplication time and again; truly a very economical polish of very highest quality.

Bright Beauty PASTE WAX

A paste wax that is properly blended and refined from excellent quality solids and solvents that produce the best drying time and thorough evaporation. A wax that is easy to handle, having "creamy" consistency and stability throughout its stocking and usage period.

Bright Beauty LIQUID (spirit) PREPARED WAXES

Complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each its own "Dry Cleaner," they keep a surface waxed with a superb protective coating necessary to many difficult surfaces such as certain floors (where adaptable), bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH

As a Glass Cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanness to glass that is actually true in fact. Different in color only as Silver polish, it imparts a highly desirable lustre to all silver *without* abrasion and can even correct the abuses of scratchy, "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX

Basic advantages are freedom from "balling up," thus does not gather dirt and impregnate the floor with hard spots difficult to remove...also is free from dusty effects. Adds the protective quality to expensive ballroom floors that means more "floor-years" to users everywhere.

Bright Beauty Heavy Duty PASTE CLEANER

Really *cleans* and *scours* more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive quality, it frees almost every surface from all forms of foreign matter to perfection.

1. BEAUTY AND DURABILITY

should be considered together. Initial appearance is important, but for a waxed surface to remain beautiful it must be durable. Durability depends not only on resistance to the abrasion of traffic, but even more so on resistance to the collection of dirt and to discoloring traffic marks. Durability is really measured by how long the waxed surface maintains a nice appearance before the necessity of complete removal and re-waxing.

2. ANTI SLIP

qualities are necessary in a good wax as a matter of safety underfoot. This important quality does not necessarily require the sacrifice of beauty and protection which are the foremost original reasons for the use of a wax. Look for the proper balance—a wax film which is not excessively slippery yet which is not tacky and does not excessively collect dirt.

3. WATER RESISTANCE

is important, particularly when considering the possibility of wet traffic and the necessity for frequent damp mopping for the purpose of removing surface dirt. Overdoing this quality means greater difficulty in applying multiple coats of wax and may seriously increase the difficulty in removal when complete cleaning and re-waxing is necessary. Water resistance is important, but so is the quality of removability.

4. SOLID CONTENT

when expressed in percentage is not nearly as important as the *quality* of the solid content. When considering good quality, 12% of solids answers most needs for good planned maintenance programs. Two applications of 12% will give better results than one of 18%. However, the more concentrated material is useful for some programs of maintenance and particularly on "washed-out" floors, etc. Over-waxing should be avoided so that periodic complete removal will not be too difficult.

5. CARNAUBA WAX

is still the most important basic ingredient in our floor waxes. When refined and compounded with other important ingredients and "KNOW HOW," it aids materially in producing the most important features of a good floor wax...ALL AROUND QUALITY OF PERFORMANCE.

• CANDY'S DISTRIBUTION AND SALES POLICY

All of our products are available for private brand resale and are sold only through Distributors except for experimental accounts in Chicago essential to research.

Wax Specialists for over 60 years

Candy & Company, Inc.

2515 W. 35th ST., CHICAGO

MAKE YOUR LABEL a Trade Mark of Quality

Federal FLOOR FINISHES

THE MOST COMPLETE LINE OF FLOOR PRODUCTS ENGINEERED FOR QUALITY, AND DURABILITY AVAILABLE

You don't compromise with quality or profit when you distribute Federal Floor Finishes. These are the products formulated to give top performance—stimulate your sales volume by creating new and repeat business.

Yes, there's a reason why leading organizations rely on Federal Floor Finishes. They know they can count on Federal for stable, high quality—for technical know-how and advice—and, they can place their complete confidence in Federal Floor Finishes.

Cash-in on a tremendous market with the products you need for "leverage" to consumate plus sales! Why not phone, write or see us for further information?

Send to Federal Varnish Division for your free copy of "What to use on floors and how to use it."

- **FLOOR FINISHES**
  - Gymnasium finishes
  - Fast drying finishes
  - Fast drying terrazzo finishes
  - Asphalt tile finishes
- **FLOOR SEALERS**
  - Heavy duty penetrating sealers
  - Surface sealers
  - Penetrating sealers
  - Fast drying sealers
  - Asphalt tile sealer
  - Terrazzo sealer
- **FLOOR COATINGS**
  - Silaconized floor coatings
  - Regular & anti-slip for all types of floors
- **FLOOR STRIPPERS**
  - Inflammable type
  - Non-inflammable type
- **SPECIALIZED PRODUCTS FOR CONCRETE**
  - Bake-alite type pigmented sealer
  - Rubber base pigmented sealer
  - Clear concrete seal
  - Concrete seal
- **WAXES**
  - Heavy duty, self polishing waxes
  - Slip resistant waxes
  - Solvent-type buffing waxes
  - Water emulsion paste wax
- **CLEANERS**
  - Asphalt tile cleaner & conditioner
  - Concentrated cleaner & conditioner
  - Wax base soap

Federal VARNISH DIVISION

2841 SO. ASHLAND AVE. • CHICAGO 8, ILL.

They discovered

Seventeenth century Dutchmen who used either poor quality oil or blubber in their soapmaking were apt to wind up in the town jail. Even by then the Dutch had discovered it takes quality ingredients to make good soap.

They discovered

Those ancient salesmen, the Phoenicians, were the first to discover soap was good business. They took the Egyptians' mixture of natural soda and animal or vegetable fats and sold it to the Gauls. The Gauls – not as smart – dallied until One A. D. before building a lucrative Roman market.

They discovered

No one would blame a Medieval male for preferring a beard to the frayed face produced by crude shaves. Luckily, about 1524 German barbers discovered that lathering the customer with soap took whiskers off cleaner and faster —and left the skin on.

have YOU discovered

that Tall Oil is being "discovered" by more and more soap manufacturers, because it simplifies processing and is definitely lower in cost?

UNION'S REFINED TALL OIL

UNITOL

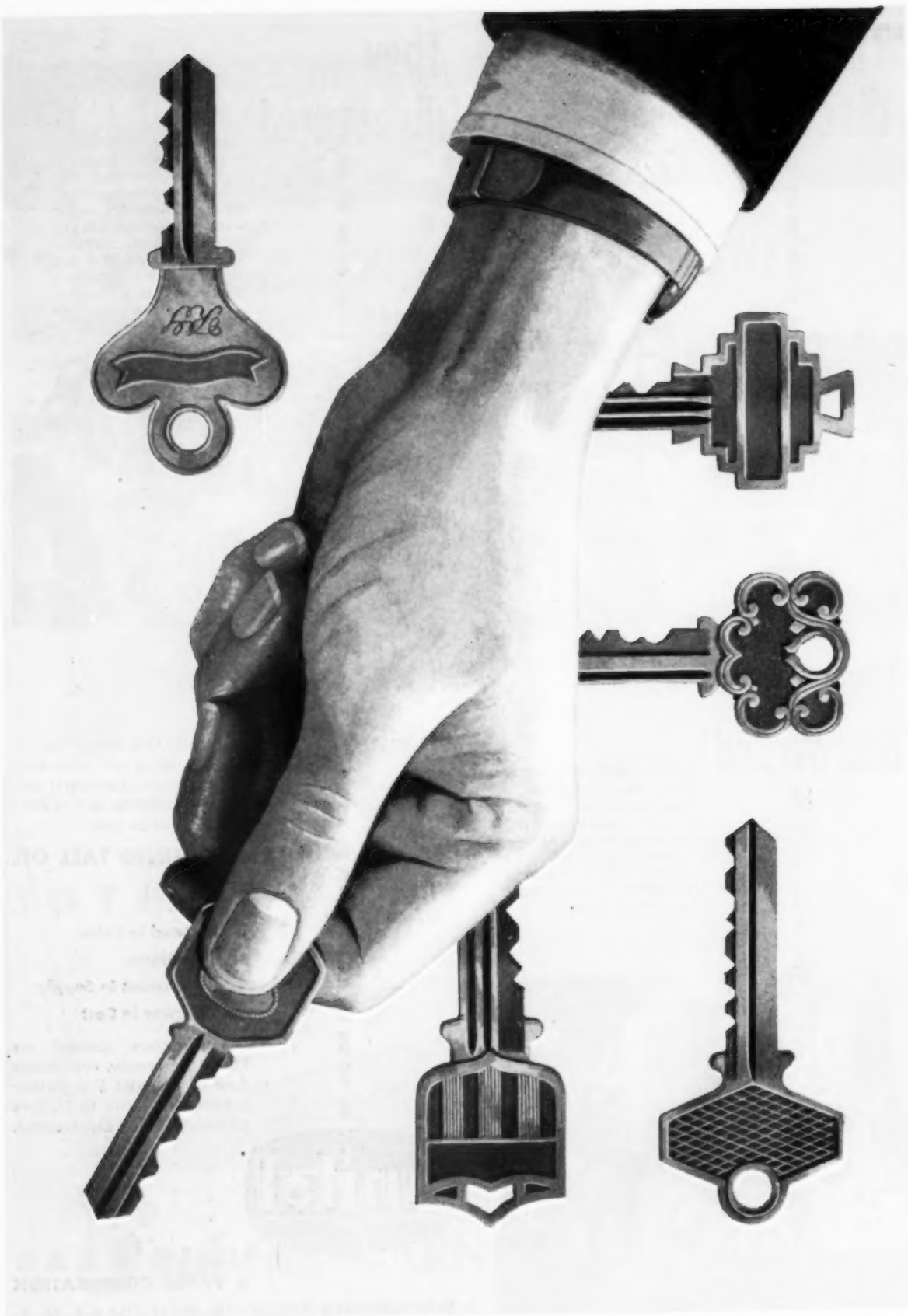
is . . . Good in Color
Uniform
Constant in Supply
Lower in Cost

Manufacturers depend on Union for steady, continuous flow of UNITOL! For further information write to Union's Chemical Sales Department.

unitol
THE REFINED TALL OIL
UNION

UNION BAG & PAPER CORPORATION

WOOLWORTH BUILDING, NEW YORK 7, N. Y.



Maybe this is just the one for you!

Our staff of able men—whose lives are devoted to solving "unsolvable" problems—may have the precise key to your present container problem *right now.*

If they haven't, they will devote their time to fashioning a key that *will.*

You see, the equipment and facilities available to our 310 highly skilled scientists and technicians are not surpassed in the industry. Nor is their record of achievement.

Canco customers have been out in front *first* with almost every new and better container—and frequently with an improved product within that container. And that's the record not just for this year. Or last year. But since the turn of the century.

Go first to the people who are first!

AMERICAN CAN COMPANY

CANCO

New York, Chicago, San Francisco; Hamilton, Canada

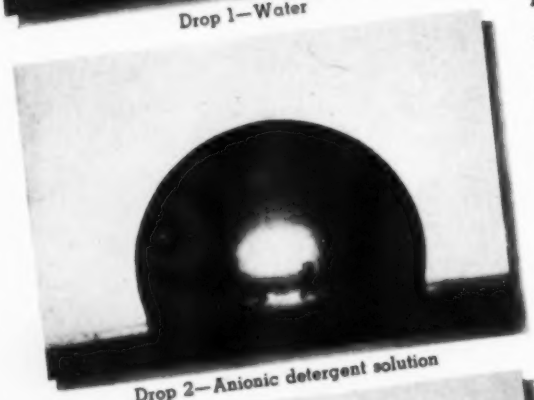
Here are a few of the special containers, developed by Canco, that have solved many marketing problems. If one of these containers doesn't ideally meet your requirements, we shall be glad to design a container that *does.*

How does TRITON X-100 clean so many surfaces?

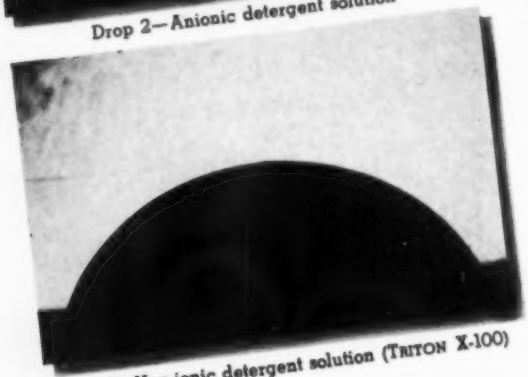
TRITON X-100 is a Rohm & Haas non-ionic detergent exceptionally effective as a cleaner for hard surfaces such as aluminum, steels, copper, brass, zinc, iron, ceramic tiles, hard rubber, linoleum, glass and many plastics.

One important reason for the all-inclusive cleaning power of TRITON X-100 is its ability to *preferentially* wet the surfaces it cleans. This phenomenon is graphically illustrated in the micro-photographs shown here. They show a typical substrate (steel in this particular case) completely immersed in oil. Individual drops of anionic and non-ionic detergent solutions have been placed on the steel plate with a micropipette. For comparison —a drop of water is also shown.

Drop 1—Water



Drop 2—Anionic detergent solution



Drop 3—Non-ionic detergent solution (TRITON X-100)

Drops #1 and #2 retain their semi-globular shape—they show a high contact angle between the drop and the test surface. The water and the anionic solution are unable to displace the oil film from the steel surface and therefore their cleaning power is limited.

Drop #3 (TRITON X-100 solution) has flattened out It hugs the surface and shows a low contact angle It is able to wet the surface *preferentially*—it displaces the oil film from the surface and therefore, does a better cleaning job.

TRITON X-100 is such an effective and universal cleaner because its solutions immediately develop a low contact angle with *many* surfaces; because it quickly wets substrates; and because its solutions readily displace soil from the surfaces; and finally, because TRITON X-100 can be easily rinsed off—leaving a sparkling clean surface.

Further information on test procedures for laboratory evaluation of hard surface detergency is available upon request.

TRITON is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

FOR *Quality* THAT BUILDS CUSTOMER SATISFACTION AND REPEAT PROFITS...

Feature

PURO

Deodorants

MORE ECONOMICAL... LONGER LASTING

MADE OF 100% PURE PARADICHLOROBENZENE FUSED WITH FINE LONG LASTING PERFUME OILS ON HUGE MODERN POWER PRESSES. ATTRACTIVELY PACKAGED!

OUTSTANDING SELLER FOR EVERY PUBLIC USE

PURO 4 OZ. DEODORANT BLOCKS

Most popular size and shape, for urinals and general use. Made to U. S. Navy specification MIL-D-2178. Attractive cellophane wrap and special tube containers protect from evaporation. Available in pleasant Surf, Lilac and Rose colors. Economical — long lasting.

EXTRA PROFITS FROM THIS EXCLUSIVE SPECIALTY

PURO SANA-BOLE DEODORANT —

Banishes odors at their source. Patented "Snap-on" wire hanger holds cake securely in bowl and practically out of sight. Delicate flower-like fragrance. Ideal for home, hotel and public toilets — a much larger market than urinal blocks. A sensational repeater, 4 oz. cake.

NEW HEAVY DUTY HANGER BLOCKS

PURO JUMBO DEODORANT BLOCKS

By popular demand, now available in 8, 12, 16 and 24 oz. cakes which are effective longer over a larger area. The three larger blocks come in convenient hanger containers. Cellophane wrap prevents evaporation before use. In clean smelling Surf, Lilac and Rose.

THE *Puro* COMPANY, Inc.

(ESTABLISHED 1929)

2801 LOCUST STREET **ST. LOUIS 3, MO.**

WRITE FOR SAMPLES AND JOBBER PRICES

ACTAMER,* Monsanto's new, nonirritating bacteriostat offers 4 advantages to increase sales

● **Actamer is effective, reduces resident skin bacteria over 97.5%.** Controlled hand-washing tests using Actamer-containing soaps showed a reduction of resident skin bacteria by more than 97.5%. Secret of Actamer's effectiveness . . . the ability to be retained on skin in minute amounts.

● **Actamer has exceptionally low toxicity for warm-blooded animals,** thus suggesting research studies in veterinary medicine. Actamer may likewise find application in such widely diversified products as industrial preservatives, diaper rinses, laundry detergents, medicated facial tissues, sanitary napkins and bath powders.

● **Actamer is colorless, tasteless** and as odorless as modern production methods can make it. Result: wide esthetic acceptability.

● **Actamer is economical.** Write for a quotation. You'll be pleasantly surprised at the price.

For technical bulletin describing Actamer, or a sample, write to MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 800 North Twelfth Blvd., St. Louis 1, Missouri.

*Trade-mark

MONSANTO
CHEMICALS—PLASTICS
SERVING INDUSTRY . . . WHICH SERVES MANKIND

Know how PQ silicates *fit your formulas*

- Because PQ Silicates are good builders and improve detergency . . .
- Because they protect metals from attack by synthetics, phosphates, etc. . . .
- Because they are economically priced . . .

. . . you'll want all up-to-date information on them. PQ Sodium Silicates include 40 products ranging from $2Na_2O,1SiO_2$ to $Na_2O,3.75SiO_2$ (also potassium silicates $K_2O,3.29SiO_2$; $K_2O,3.3SiO_2$ molecular ratio).

You're welcome to descriptive bulletins on the complete line—liquid, powdered and solid forms. And we shall also be glad to discuss with you any technical details as to which PQ products can serve you best.

PHILADELPHIA QUARTZ COMPANY
1152 Public Ledger Bldg., Philadelphia 6, Pa.

☐ Please send bulletins on liquid, powdered and solid silicates ☐ Have a representative call

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

SAF-FLOR

. . . a new anti-slip floor wax

Emphasis on

. . . High Gloss!

. . . Durability!

. . . Safety!

Have you tested a sample of this new anti-slip, high-gloss floor wax? If not, let us send you a sample today!

An entirely new safety wax based on a special patented copolymer. Water resistant in 12-24 hours. Easy to apply and remove. Withstood damp mopping for 25 consecutive days. Freezing does not impair gloss more than 10%.

Available to the trade under SAF-FLOR label or your own private brand. For full information, write to

SHAWMUT SPECIALTY COMPANY
315 Centre Street **Boston, Mass.**

Faithfully recreates the fragrance of
the living flower—a substitute for the Absolute at a savings
Rosan
ROSE DE MAI SYNTHETIC
by Albert Verley & Company, Inc.

Albert Verley & Company's

Rosam

. . . a worthy substitute for the costly natural Absolute

Rosam is a remarkable achievement in synthesis. It has won a permanent place for itself in all forms of perfumery as a complete substitute for Absolute Rose de Mai. You can use it in your most significant formulas — alone or in combination with the natural product, without excessive cost burden — and with confidence that results are a credit to your perfumes and your prestige. Its price is just $25.00 a pound — especially noteworthy now, in view of the continuing high cost of Rose Absolutes, particularly Bulgarian Otto of Rose.

We suggest that you experiment with Rosam. Appraise its possibilities in your present compounds, or the new one you are now creating. Write today for working sample.

ALBERT VERLEY AND CO., INC.
466-472 W. Superior St., Chicago 10, Ill.
114-116 E. 25th St., New York 10, N. Y.

MEFFORD CHEMICAL CO.
1026 Santa Fe Ave., Los Angeles 21, Calif.

ALBERT VERLEY AND CO., INC.
222 Front St., East, Toronto, Ontario

Representatives in all principal cities throughout the world.

Where Your Dollars Have More Scents

Albert Verley

AND COMPANY, Inc.

Headquarters for Odor Appeal

Synthetic Aromatic Products and Organic Isolates • Synthetic Flower Oils and Aromatic Bases • Bouquets and Finished Compositions.

After Closing . . .

Conoco Acquires Bryton

Continental Oil Co., Ponca City, Okla., recently purchased the plant and manufacturing facilities of Bryton Chemical Co., Trainer, Penna. Bryton was one of the first producers of synthetic oil-soluble sulfonates for use in industry. Its products are used in detergents, lubricating oil additives, dry cleaning and textile, cutting and leather finishing oils.

E. W. Carlson, Robert L. Anderson and Vernon F. Beyer, the founders of Bryton Chemical Co. are continuing to manage the plant and sell the plant's line of chemical products under its name.

The purchase of Bryton permits the expansion of Continental in the petrochemical field. Conoco already operates a sulfonation plant in Chicago, which it recently acquired from Stepan Chemical Co., producers of industrial synthetic detergents. The synthetic detergents made at the Chicago plant are all of the water-soluble sulfonate type, while the sulfonates produced at the Bryton installation are soluble in oil. Continental is currently completing expansion of the facilities at its Baltimore, Md., petrochemical plant.

Kady Names Can. Agent

Kinetic Dispersion Corp., Buffalo, recently announced the appointment of Charles Tennant & Co. as its agent and representative for the sale of Kady mills in Canada. Tennant maintains sales offices at 96 Bloor Street West, Toronto, Ontario and 440 Canada Cement Building, Montreal.

Stephenson to Verley

J. H. R. Stephenson has become associated with the sales department of Albert Verley & Co., Chicago, working out of the New York office, it was announced recently by Edward J. Strobl, vice-president. Mr. Stephenson was formerly associated with

J. H. R. STEPHENSON

Givaudan-Delawanna, Inc., and before that with Aromatic Products, Inc., both of New York.

N.E. Oil Chemists to Meet

The Northeast Oil Chemists' Society will meet at the Military Park Hotel in Newark, N. J., on April 7. Dr. W. C. Ault, eastern regional research laboratories in Philadelphia, will speak of the "Recent advancements and trends in utilization of animal fats in industrial and edible fields," it was announced by the secretary recently.

New Calgon Distributor

Calgon, Inc., Pittsburgh, recently appointed All-State Brokerage Co., Jacksonville, Fla. as the northern Florida representative of its household department. Principal products which All-State will distribute for Calgon are the packaged household water conditioner "Calgon," the machine dishwashing compound "Calgonite," a new bath powder combining water-scenting and water-conditioning properties, called "Calgon Bouquet," and a new washing compound, "Thanx," for use in electrical dishwashing and as an aid to soap in clothes washing.

Hild in Chicago

In a caption under a photograph on page 155 of the February issue of *Soap and Sanitary Chemicals*, dealing with the awarding of a prize to the owner of what is believed to be the oldest floor machine in operation, Hild Floor Machine Co. was identified as being located in Milwaukee, Wis. Actually the firm has its headquarters in Chicago. The caption also erroneously made it appear that the floor machine for which the prize was awarded was made by Hild.

Lever House Award

Lever Brothers Co., New York, recently received certificates honoring Lever House, the company's new home office building on Park Ave. between 53rd and 54th Sts., as one of the outstanding buildings constructed in the nation during the past year. The presentation of the certificate highlighted the 84th anniversary dinner of the New York chapter of the American Institute of Architects at the Hotel Biltmore. The award was accepted on behalf of Lever Brothers by Jervis J. Babb, president, and by Louis Skidmore of Skidmore, Owings & Merrill, the architects.

"Versene" Made in Sweden

"Versene" tetrasodium salt of ethylene diamine tetra-acetic acid, chelating agent of Bersworth Chemical Co., Framingham, Mass., is being made under license by Rexolin Fabriken AB, Helsingborg, Sweden, it was announced recently. Swedish production is said to cover the soft currency countries which are unable to obtain the product from the American firm owing to the dollar shortage.

Deacon Joins Wrisley

Joe Deacon, Jr., recently was appointed as the representative of Allen B. Wrisley Co., Chicago for the Cleveland area. He was formerly with Bourjois, Inc., New York, in this same area.

D-12 Program Set

Program details for the annual meeting of Committee D-12 on Soaps and other Detergents, American Society for Testing Materials, which is to be held on March 16 and 17 at the Park Sheraton Hotel, New York, were announced recently. The schedule of subcommittees is as follows:

Monday Morning—March 16

9:30 to 12:00—S-4 Alkaline detergents (M. F. Graham, chairman)
T-4 Analysis of alkaline detergents (W. H. Koch, chairman)
A joint meeting
11:00—"A realistic approach to silicate and phosphate analysis in synthetic detergent compositions"—A. M. Mankowich
9:30 to 12:00—T-6 Analysis of Metal Cleaners (J. C. Harris, chairman)
9:30—"Metal Cleaning"—William Stericker

Monday Afternoon—March 16

1:00 to 3:00—S-1 Specifications for soaps (Frederick Krassner, chairman)
T-1 Soap Analysis (E. W. Blank, chairman)
A joint meeting
1:00—"The effects of detergents on sewage treatment processes"—Raymond Manganelli
1:00 to 3:00—T-2 Analysis of synthetic detergents (Rueben Bernstein, chairman)
3:00—"Analysis of hard water soaps: The direct determination of active sulfonate in mixtures of soap and nacconol RB-85"—L. F. Hoyt and J. E. Walter
5:00 to 6:00—G-1 Advisory (J. C. Harris, chairman)

Tuesday Morning—March 17

9:30 to 12:00—T-5 Physical testing (A. M. Schwartz, chairman)
11:00—"A multi-surface cleaning test"—M. N. Fineman

Tuesday Afternoon—March 17

12:30—Luncheon
1:30—General Meeting
Committee Business
2:30—Papers
"Asphalt tile cleaning specification"—A. C. Zettlemoyer
3:00—"Dry cleaning"—G. P. Fulton

Odor-Ban Wins Claim

Zenith Electric Mfg. Co., Detroit, has agreed to stop all manufacture and shipment of electric household deodorizers, it was recently announced by Henry Kahn, vice-president of Odor-Ban Corp., Cleveland. He stated that because of Zenith's agreement, his company was withdrawing its claim for damages for alleged patent infringement, although Zenith admitted, Mr. Kahn stated, that it had infringed the U. S. Patent granted to H. F. Costello covering electrical deodorizers. The patent is owned by Odor-Ban Corp., which manufactures and distributes electrical deodorizers under the advertised trade name of "Odor-Ban."

Heads C-P-P Premium Dept.

Colgate - Palmolive - Peet Co., Jersey City, N. J., recently announced the appointment of Harold G. Karn

HAROLD G. KARN

to be manager of the company's premium department. The department handles the premium operation for Colgate's line of "Octagon" and "Kirkman" products. Mr. Karn has been an executive in the department for many years.

Receive Management Award

Colgate - Palmolive - Peet Co., Jersey City, N. J. and Procter & Gamble Co., Cincinnati were recently awarded Certificates of Management Excellence by the American Institute of Management, New York. According to Jackson Martindell, president, only 330 companies in the United States and Canada, out of 3000 concerns whose methods were studied by the Institute were found eligible to receive the designation. This is the third consecutive year in which both companies have obtained the A.I.M. award. The companies were judged for excellence in 10 separate areas of management—economic function, corporate structure, health of earnings growth, fairness to stockholders, research and development, directorate analysis, fiscal policies, production efficiency, sales vigor and executive evaluation.

Harcord Acquires Plant

Harcord Manufacturing Co., Jersey City, N. J. recently announced plans to move its entire operations to a newly purchased building at 125 Monitor St., Jersey City. Harcord specializes in paper canisters for cleansers, insecticides, drugs and cosmetics. The new building consists of 124,000 square feet on six floors and has a rail siding. The move will have been completed by May 1.

Maisch Haughton Treas.

John F. Maisch recently has been elected treasurer of E. F. Houghton & Co., Philadelphia, by the board of directors following the annual stockholders meeting. Mr. Maisch has been controller of the company since June, 1950 when he joined the firm.

At the annual stockholders' meeting, Major A. E. Carpenter was reelected chairman of the board, and Wm. F. MacDonald was renamed president. Directors also reelected were: Mrs. E. A. Carpenter, A. E. Carpenter, Wm. F. MacDonald, R. H. Patch, D. J. Richards, C. H. Butler, H. B. Fox, J. T. Eaton, D. C. Miner, and W. K. Barclay.

Johnson Sales Conference

A conference of district and regional sales managers of S. C. Johnson Son, Inc., Racine, Wisc. was held in Dallas, Tex., recently. R. W. Carlson, vice-president in charge of marketing, presided at the meeting.

Steel Maintenance Booklet

Cleaning and maintenance of clad steel equipment is the subject of a new booklet recently published by Lukens Steel Co., Coatesville, Pa. The booklet gives the cleaning methods for equipment before and after it is in service. Recommended for regular cleaning are: soap and water, bristle brush scrubbing, fine pumice, solvents (naphtha, alcohol, detergents, acetone, ether, and carbon tetrachloride). For cleaning polished stainless-clad surfaces, the company suggests a five to ten per cent nitric acid solution, with one to two per cent sodium dichromate to prevent discoloration.

States Consider Pesticide Laws

WITH approximately 44 state legislatures meeting this year, nine new or amended versions of older actual or proposed laws governing the sale of insecticide and other pesticides are now being considered. In addition to specific pesticide bills, several state legislatures have under consideration others designed to regulate such chemical specialties as hair lacquers, anti-freezes, paints and varnishes and cosmetics and soaps.

In addition, two bills have been introduced in the U. S. House of Representatives by Congressman Delaney. These cover soaps, pesticides and cosmetics.

Arkansas Senate Bill No. 171 Pesticides has passed the State's Senate and has been referred to the House Committee on Agriculture. It would remove the exemption in the present law for pesticides registered under the federal pesticide law. This would bring pesticides under the law with registration fees ranging from $20 to $35 per product. In addition, labels would have to show, besides the usual requirements, the month and year of manufacture of the pesticide; and a statement of the name and percentage of each active ingredient together with the total percentage of the inert ingredients or such other statement of ingredients as may be approved by the State Plant Board.

California Assembly Bill 2537, amending the state's economic poisons law, would increase annual registration fees to $75 for the first economic poison with up to 10 for the same amount; all above the first 10 would be $4 each. The present fee is $50 and $2 per product over 10. In the case of household pesticides with less than a total retail value of $500—$15 for the first two brands registered and $4 for each additional brand. The bill has been referred to the Agriculture Committee.

Colorado House Bill 141 would amend the present provision in the pesticide law relating to registration fees to require an annual registration fee of $5 for each economic poison registered up to 10 brands, and $2 each for additional brands registered. The present registration fee for pesticides in Colorado is $5 per brand with a $50 maximum.

Montana Senate Bill 94 amends the insecticide, fungicide and rodenticide law of 1947 and provides for optional labeling. Registration is required annually, with no fees mentioned. This brings the Montana bill more nearly in line with the model bill.

POWDER BLEACHES

Powdered bleaches based on sodium perborate will be discussed in an article to appear in the April issue of "Soap and Sanitary Chemicals." Their formulation, use and growth in the American market will be covered. The use of sodium perborate in soaps and as a sanitizing agent will also be discussed.

Minnesota is considering legislation in two bills pertaining to the sale and distribution of paints and varnishes and the manufacture and sale of anti-freeze in the same general manner as economic poisons.

New Mexico Senate Bill 168, which would amend the state's economic poisons law to increase annual registration fees from $2 to $10, has passed the senate and is before the House Committee on Irrigation and Drainage.

New York Senate Bill No. 1281 would amend the public health law of the state to establish a consumers' bureau in the state department of health to regulate cosmetics, drugs, health devices and foods. Soap would be included under the definition of cosmetics. Special labeling requirements for all products covered would be imposed, including labeling to protect allergies. Another New York bill, No. 81, was introduced in the state senate to amend the penal law in relation to anti-freeze products.

Pennsylvania House Bill No. 320 has been introduced in the state's House and referred to the committee on law and order. It would add a section to the State's penal laws making it a misdemeanor to manufacture or sell any liquid hair spray which is inflammable unless the product is labeled as such. A fine not exceeding $500 and/or imprisonment for six months or both is provided.

South Carolina is considering a new pesticides bill (Senate No. 100) to repeal the present pesticide law and enact a new one patterned after the uniform state and federal laws. It has been passed in the Senate and referred to the House Agriculture Committee. Features of the new bill objectionable to the Chemical Specialties Manufacturers Assn. include 1.) A label statement of the name and percentage by weight of each active ingredient together with the total percentage by weight of the inert ingredients; 2.) Registration fees of $10 per brand for each of the first 20 registered and $5 each for brands in excess of 20. There are no registration fees under the present law; 3.) No provision for repealing the special disinfectant law which requires the registration and payment of registration fees for disinfectants.

Texas House Bill No. 457, which would amend the Texas Livestock Act, would require that a licensed, graduate veterinarian or a graduate chemist or a licensed pharmacist supervise the compounding or manufacture of any livestock remedy or insecticide that is offered for sale or distribution. The amendment would further require that the supervisor be on the premises at all times while the business is in operation and be in actual control of all manufacturing or formulation of livestock remedies and insecticides.

Washington Pesticides Bill—Senate No. 249—has been introduced and referred to the senate committee on agriculture and livestock. In general, the bill requires the licensing of all dealers in insecticides and herbicides and would impose record-keeping requirements. Washington recently announced that it has decided to accept labels that have been approved by the Federal Government for toxic pesticides.

Wyoming House Bill 168 has

been amended in committee. It now states that "all provisions under the act regarding labeling as to formula content and caution statements shall conform with like federal requirements."

Originally the paragraph called for the labeling of name and percentage of all active and inactive ingredients. It also originally provided that a caution statement appear on the label of all products which cannot be used generally in food establishments or on vegetation.

SAACI to Hear Keyes

Dr. Donald B. Keyes, chemical consultant, will speak at a luncheon meeting of the Salesmen's Association of the American Chemical Industry to be held at the Hotel Commodore, New York on March 17. His topic will be "How to Get Along with Research Directors." Cocktails will be served from 12 noon, with luncheon following one-half hour later.

Inland Steel Merger

Inland Steel Co., Chicago, recently announced that Inland Steel Container Co., a wholly-owned subsidiary corporation since 1939, has become a division of the parent company. The merger was effected for technical reasons, a company official said, and there are no changes contemplated for the container firm's operation or personnel. The new Inland division manufactures steel pails, drums, and containers. Its principal fabricating plants are located in Chicago, Jersey City, N. J., and New Orleans, La.

Luncheon for Stoll

Dr. Max Stoll of Firmenich International, Geneva, Switzerland, was guest of honor at a luncheon in New York on March 3 at the University Club given by Charles C. Bryan, president of Firmenich Incorporated, New York affiliate of the Geneva company. Over a hundred scientific leaders in aromatic chemicals and perfuming attended to honor Dr. Stoll who is the 1953 recipient of the Fritzsche Medal, annual award for outstanding research in essential oils and related chemicals. The award will be presented to Dr. Stoll at the spring meeting of the American Chemical Society in Los Angeles.

Among those who attended the luncheon and who heard Dr. Stoll tell some of his aromatic chemical research experiences were Andre Firmenich, senior partner of Firmenich International, Dr. Roger Firmenich, partner and technical director of the firm, Dr. Arturo Gordi-Pey, chief perfumer, and Dr. Marston T. Bogert, retired Columbia University professor and dean of American perfume chemists. Dr. Stoll was introduced by Dr. Firmenich. Dr. Stoll is giving a series of lectures at American universities and before scientific groups. He arrived in the U. S. February 22 and plans to return to Switzerland late in April.

New Corrugated Mats

The availability of corrugated mats made of rubber links woven on 12 gauge spring steel wire, recently was announced by General Scientific Equipment Co., Philadelphia. The company claims the GS-mats are particularly adapted for use where moisture, oils, animal fats, acids, chemicals and abrasives are apt to be on the floor as the rubber resists deterioration.

Labeling Recommendations

The committee on precautionary labeling of the CSMA recently passed two resolutions on the first reading, pertaining to the necessity for following current statutes when labeling. The first resolution pointed out that the labels and precautionary information committee of the Manufacturing Chemists' Association adequately covering those who work with basic chemicals or mixtures in large manufacturing quantities in MCA's Warning Labels Manual. Therefore, the scope of the activities of the CSMA committee on precautionary labeling should be confined to the safety of the consumer of chemicals and chemical mixtures.

The second resolution stated that the committee will reach its conclusions on the basis of careful consideration of all current and proposed appropriate laws, ordinances and regulations and all other guides in any form whatsoever within the notice of the committee. Where the committee finds such guides to be unnecessarily restrictive or burdensome, or inadequate to protection, or inconsistent with accepted technical information, the committee will depart from such guides in reaching its conclusions, drawing attention to the requirements of existing laws, ordinances and regulations which require specific precautionary labeling.

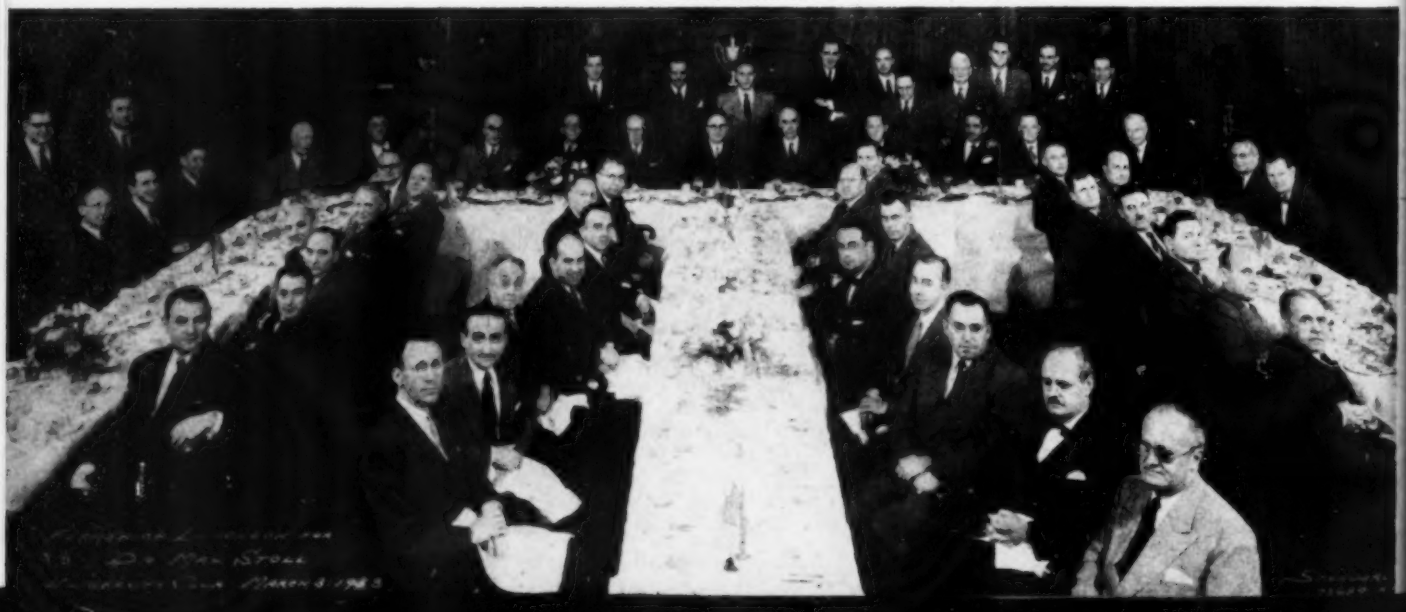


Photo taken during luncheon for Dr. Max Stoll of Firmenich at University Club, New York, March 3.

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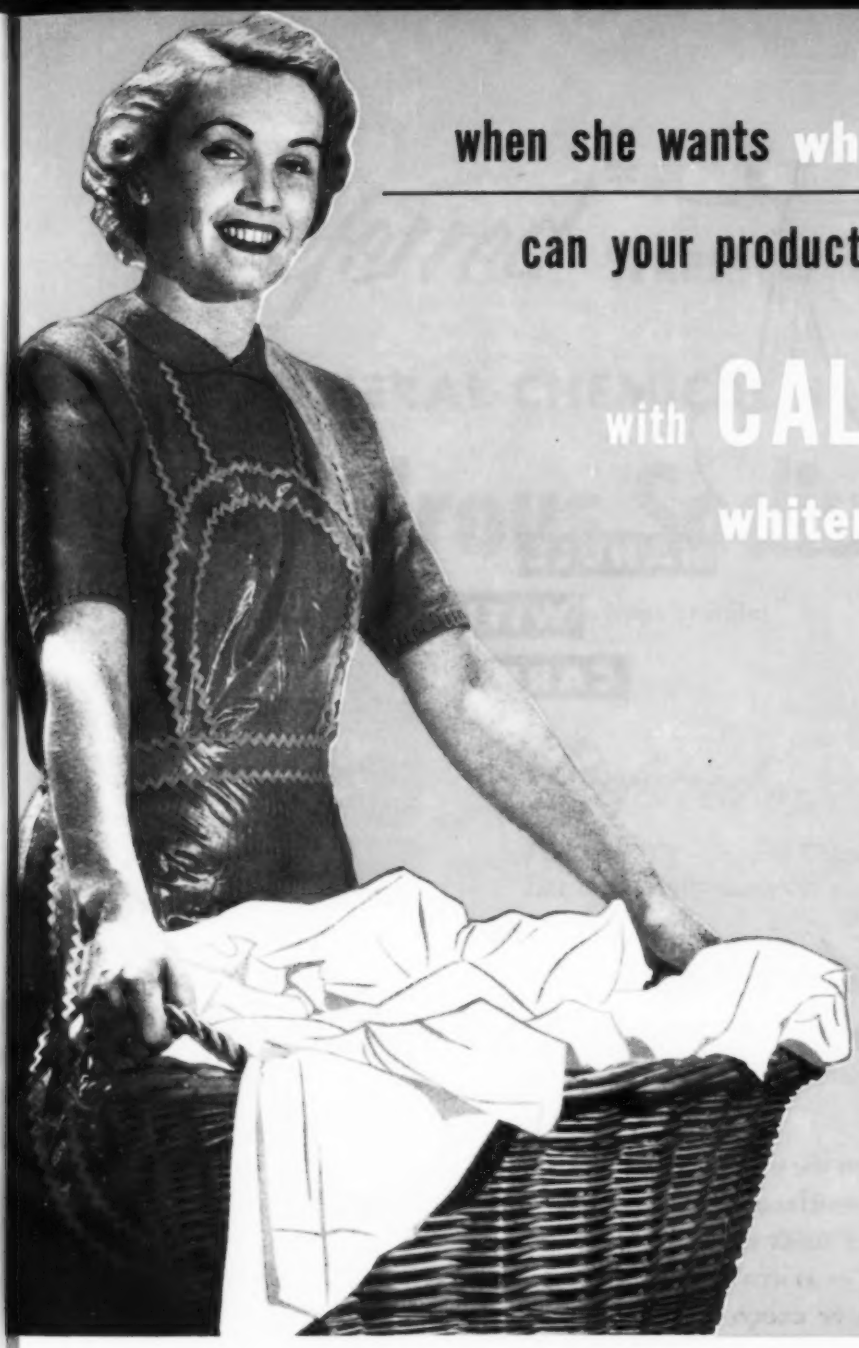

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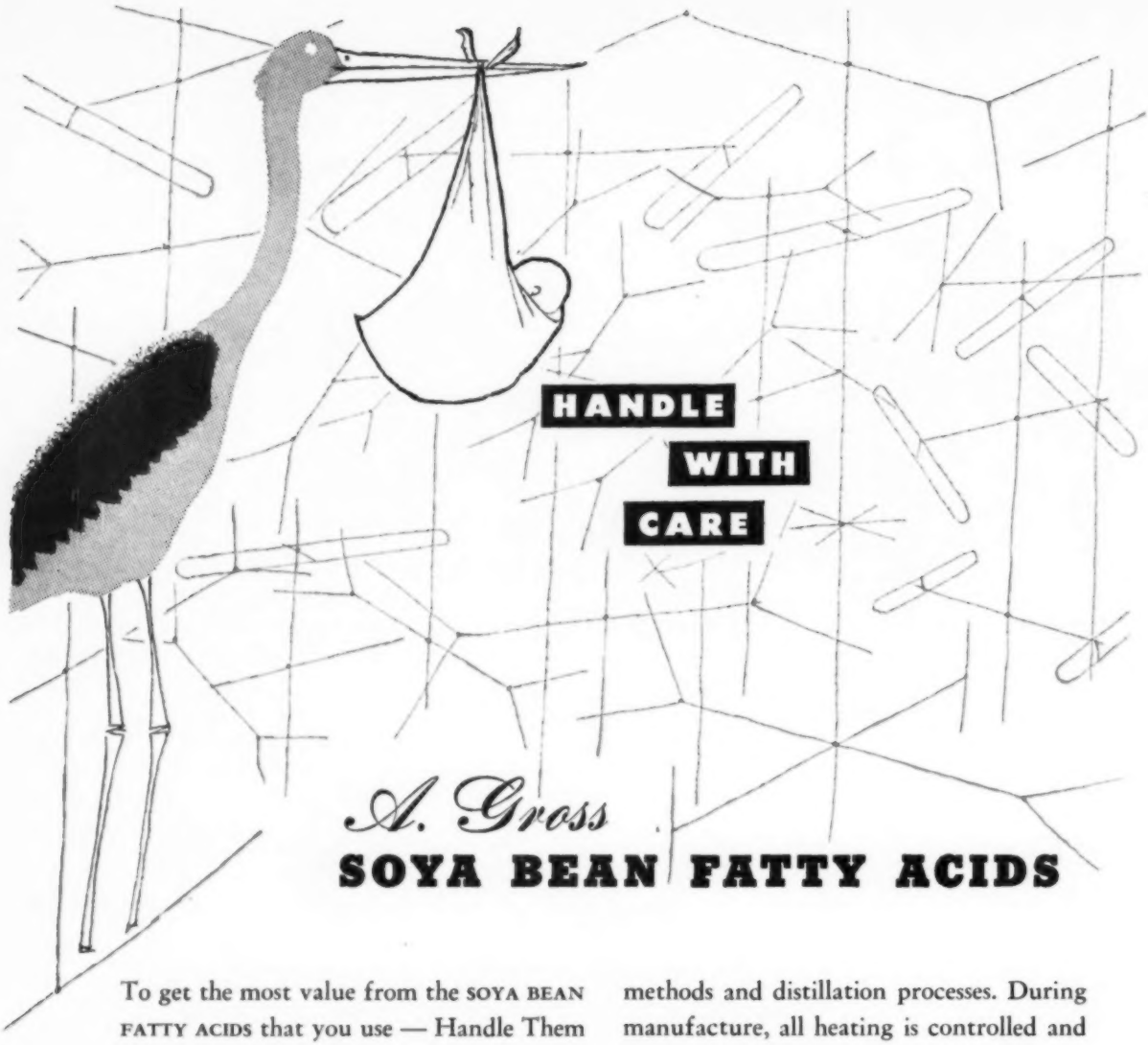

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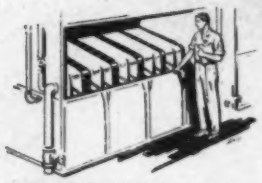

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Tests show TRIPLE SERVICE Superiority—TEST PANELS from the "Scrubbing Machine" show where Triple Service Wax excels. When scrubbed with plain water in the WATER RESISTANCE test (equal to 50 damp moppings), it did not come off and did not lose gloss; when scrubbed with soap in the REMOVABILITY test, Triple Service came off completely. PRODUCT "C" failed the test, as did the other samples tested. It had little resistance to plain water, yet was not completely removed by soap solution.

FREE ON REQUEST!
WHIZ SPEEDY CALCULATOR

Handy for finding selling prices and percentage of profit at a glance. Write for yours—it's free.

Industrial Division
***R. M. Hollingshead* Corporation**
LEADER IN MAINTENANCE CHEMICALS
840 Cooper Street, Camden 2, N. J.

LAB-TESTED, FIELD-TESTED—
BEST QUALITY *EVER* IN THE
LOW PRICE RANGE

- **Packaged in 1, 5 and 55-gal. containers**
- **Available for private label**
- **Write for prices**

You've got a great sales story when you sell Triple Service Wax! Write for more details!

An Invitation to the . . .

30th Annual Convention
National Sanitary Supply Association

March 22, 23, 24, 25

Conrad Hilton Hotel
Chicago, Ill.

The Officers and Directors of your National Sanitary Supply Association join with me in assuring you of another bigger and better National Convention and Trade Show in Chicago, March 22, 23, 24, 25, 1953, Conrad Hilton Hotel.

Each year your convention and trade show has grown in size and educational opportunities. This year exhibitors are going all out to bring you the newest in merchandise as well as advanced plans in better merchandising methods.

This year's convention will stress the "Clinic Approach" to trade show technique. Each exhibitor will have at the disposal of distributors, skilled engineers and technicians, interested primarily in showing the distributor how his product can best serve the consumers' cleaning, maintenance and sanitation problems. By visiting each exhibitor, distributors can be informed of the latest developments and thus be better qualified to serve the best interest of their customers.

Your National Sanitary Supply Association, "Institute of Sanitation and Modern Cleaning Methods" is now a reality. Its spontaneous acceptance and welcome acclaim by eminent public health authorities from Coast to Coast, proves again your Association's value, not only to its members, but to the betterment of public health throughout the Nation.

You can be proud of the work your Association is performing in your behalf and we look forward to greeting you again in Chicago.

Martin J. Peters
President,
National Sanitary Supply Association, Inc.

SWEEP DUST FROM AIR-FURNITURE-FLOORS

with entirely different SANITREET--the anti-static, non-oily dust absorber mist that can't burn!

• CLEANS THE AIR
• CLEANS THE SURFACE
• FRESHENS THE ATMOSPHERE

Spray dust out of the air

Spray yarn brush or dust mop

Spray dust cloth

● New principle . . . new product!

Dust particles are suspended in the air by their lightness and static charges.

Spray the SANITREET Dust Absorber Mist lightly throughout the air. Its penetrating and anti-static action speeds settling of airborne dust particles.

The atmosphere instantly becomes refreshingly pleasant.

Floors are thoroughly cleansed of all settled dust when swept with the SANITREETed dust mop or yarn brush.

Furniture and woodwork are wiped dustfree quickly with a SANITREETed dust cloth.

Air and surfaces remain *clean* and *fresh longer.*

Safe to use! Will not burn. Contains no animal, mineral, vegetable oils or wax. It will not stain . . . for SANITREET Dust Absorber Mist is soluble in water.

CHEMICAL SERVICE OF BALTIMORE, INC.

HOWARD AND WEST STREETS, BALTIMORE 30, MD.

HIGH ACTIVITY* *at low cost*

One of the most potent synthetic detergents, highly concentrated MAPROFIX POWDER LK offers a truly unusual product, noted also for its exceptional foaming qualities—large volume with extraordinary persistency.

With an activity of 92%, MAPROFIX POWDER LK, especially recommended as a carpet cleaning, general household and industrial detergent and as a foaming agent in dentifrices and shampoos and other cosmetic products, is also an excellent dispersing agent for insecticides, fungicides and cosmetics.

92%* **ACTIVE** detergent and foaming agent

MAPROFIX POWDER LK is a highly effective wetting and penetrating agent, is exceptionally resistant to water hardness and readily, permanently emulsifies many types of oils and is no more toxic than ordinary soap.

In short, MAPROFIX POWDER LK is the ideal solution to the detergent and foaming problems of manufacturers of diverse products as well as providing a completely stable, most effective agent for specific compounding needs.

We will gladly send a working sample upon request.

ONYX

OIL & CHEMICAL COMPANY

INDUSTRIAL DIVISION

186 WARREN ST., JERSEY CITY 2, N. J.

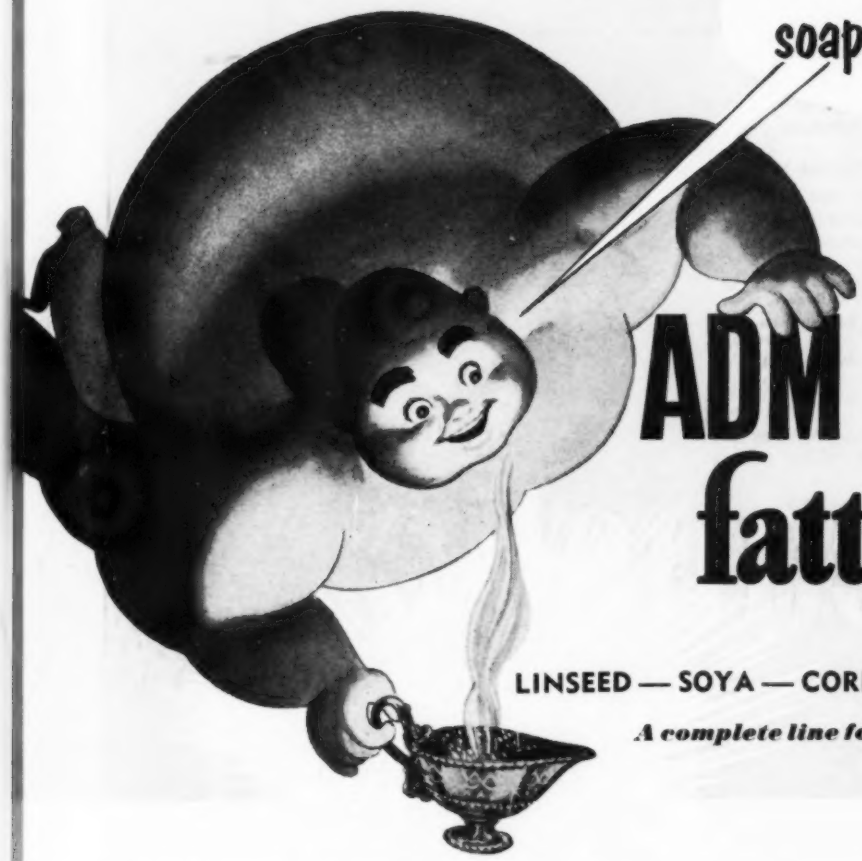
CHICAGO · BOSTON · CHARLOTTE · ATLANTA

For Export: ONYX International, Jersey City 2, N. J.

West Coast Representative: E. S. Browning Co., San Francisco, Los Angeles

Mr. fatty acid says:

"Looking for HONEST VALUE in soap-making acids?"



You'll get more for your money in . . .

ADM Vegetable fatty acids

LINSEED — SOYA — CORN — CORN-SOYA — COCONUT

A complete line for quality soaps at all price levels

The truly smart and successful buyer—and especially the buyer of chemicals—knows that there are many elements in a "bargain." Most important, we believe, is the assurance of *getting what you order*.

As we all know, this is a special problem in buying fatty acids for soap-making. For even slight variations in raw materials and processing can impair the purity of acids—and their uniformity—and their titre, color and saponification characteristics.

If you are now a buyer of ADM fatty acids, you are well aware that high quality is *unvarying* in these products. The reasons include such factors as our unmatched plant facilities, production control, and others. The results include superb clarity in liquid soaps . . . purity in the highest degree . . . and a minimum content of unsaponifiables.

Should you ever take a chance on anything less than this—at any price? Check the ADM line, and let us send you samples and technical data. Let us help you on your specific problems.

Take the Scientific Shortcut
with **Archer fatty acids**

MAIL THIS COUPON →

4

ARCHER-DANIELS-MIDLAND COMPANY
600 Roanoke Building • Minneapolis 2, Minnesota

___Please send samples of_____ADM fatty acids for soap-making.
___Send Technical Bulletin.

NAME_____

COMPANY_____

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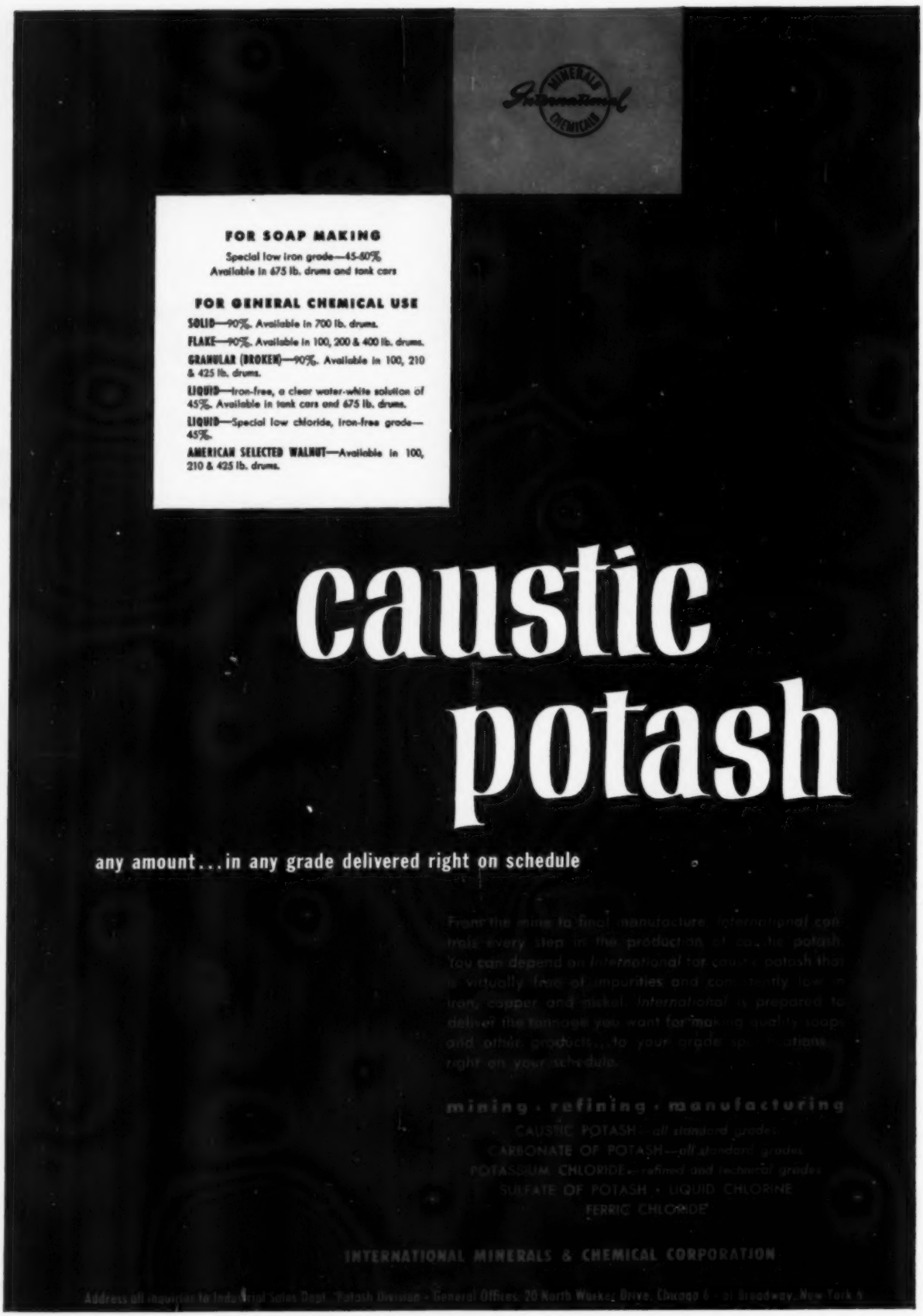
CITY_____ ZONE___ STATE_____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MINERALS & CHEMICAL
FOR SOAP MAKING
Special low iron grade—45-60%
Available in 675 lb. drums and tank cars
FOR GENERAL CHEMICAL USE
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FLAKE—90%. Available in 100, 200 & 400 lb. drums.
GRANULAR (BROKEN)—90%. Available in 100, 210 & 425 lb. drums.
LIQUID—Iron-free, a clear water-white solution of 45%. Available in tank cars and 675 lb. drums.
LIQUID—Special low chloride, iron-free grade—45%.
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any amount...in any grade delivered right on schedule
From the mine to final manufacture, International controls every step in the production of caustic potash. You can depend on International for caustic potash that is virtually free of impurities and consistently low in iron, copper and nickel. International is prepared to deliver the tonnage you want for making quality soap and other products...to your grade specifications...right on your schedule.
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CAUSTIC POTASH—all standard grades
CARBONATE OF POTASH—all standard grades
POTASSIUM CHLORIDE—refined and technical grades
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FERRIC CHLORIDE
INTERNATIONAL MINERALS & CHEMICAL CORPORATION
Address all inquiries to International Sales Dept., Potash Division - General Offices: 20 North Wacker Drive, Chicago 6 - or Broadway, New York 5

Heretofore available in experimental quantities only, the full-scale production of Emersol 241 Vegetable Elaine opens many new applications where low titer is essential. Specifications of this all-vegetable oleic acid are as follows:

Iodine Value	85-95
Titer, °C	5-10
Acid Value	191-197
Saponification Value	192-198
Color (Lovibond 5¼" cell)	15Y/3R Max.

This new product, a low-titer counterpart of Emersol 240 Vegetable Elaine, is the tenth oleic acid in the Emery line.

EMERSOL VEGETABLE ELAINES are superior replacements for olive oil foots in soaps and shampoos and so-called "castile" soaps. Check Emersols 240 and 241 in your formulation today!

A complete selection of high-quality, high-stability Emersol Elaines assures you of the best oleic acid for your specific application.

DISTILLED GRADES

Emersol 210 Elaine
Emersol 211 Low-Titer Elaine
Emersol 212 Elaine
Emersol 220 White Elaine
Emersol 221 Low-Titer White Elaine
Emersol 233 LL Elaine
Emersol 240 Vegetable Elaine
Emersol 241 Vegetable Elaine

UNDISTILLED GRADES

Emersol 200 Saponified Red Oil
Emersol 201 Saponified Red Oil

Mail coupon for complete information on Emery Vegetable Elaines.

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*Title*_____

*Company*_____

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Complete . . .

DO YOU KNOW that two out of every three so-called Sanitary Supply jobbers actually make some of the products which they sell? Conversely, few manufacturers in the field make everything which they sell. Almost all buy certain items for resale. And both groups read SOAP & SANITARY CHEMICALS.

This is why SOAP & SANITARY CHEMICALS with its 6,000 **proved** and paid ABC circulation is the only publication today **completely** covering the entire market for sanitary chemical products and accessories.

Every issue of SOAP & SANITARY CHEMICALS carries 70 or 80 pages of information on soaps, cleansers, waxes and polishes, aerosols, insecticides, disinfectants, deodorants, and allied products, accessories and equipment, — not just a few token pages of reading matter, but 70 or 80 pages, — information of interest and value to **all,** whether classified as manufacturers, converters, jobbers or repackers.

No other publication gives this market as full attention as does SOAP & SANITARY CHEMICALS. Nor does any other publication serve the entire market of soaps, detergents, sanitary chemicals, and allied products.

This is why SOAP & SANITARY CHEMICALS can do and does a job of full and complete advertising coverage in its field, — the highest concentration of real readers, — deep market penetration, — top advertising effectiveness.

SOAP & SANITARY CHEMICALS

Published Monthly by

MAC NAIR-DORLAND COMPANY

254 West 31st Street, New York 1

KNOLAR

EMPIRE FLAKE and GRANULATED SOAP

Tops in soap quality. Made from finest tallow and coconut oil. Chalk-cliff white, tissue thin, neutral and free from additives, oxidants, etc. Flakes contain 92% pure soap; granular 94%. Recommended for washing linens, silks, and other fine fabrics. No finer soap quality than EMPIRE!

VIKING FLAKE and GRANULATED SOAP

A 100% all-tallow high-titre (42 C) soap for heavy duty laundering. Flakes contain 90% soap; granular 92%. Heavy bodied suds for high temperature operations. Excellent detergency. Always uniform in quality, neutrality and color.

KEYSTONE FLAKE and GRANULATED SOAP

A 100% low-titre (39 C) for laundering and general cleaning in hospitals, hotels, institutions, etc. Flakes contain 90% soap; granulated 92%. Uniform, neutral, good odor and color; contains no additives. Meets Federal Specification P.S. 566-B for chip soap.

UTILITY FLAKE and GRANULATED SOAP

High quality tallow-coconut soap compounded with special soda silicate to give product excellent for general sanitary, dishwashing and laundering purposes. Contains 74% pure soap.

TRICOL

A special built soap-base detergent excellent for heavy-duty cleaning, washing and laundering. Granulated. Made from tallow-coconut soap base.

All in standard packages; Osnaburg Bags 100 to 125 lbs.; 24 gal. and 44 gal. fibre drums; 50 lb. drums; 25 lb. cartons; and special packaging where quantity warrants.

Sold exclusively to jobbers and converters

KNOLAR *Products, Inc.*

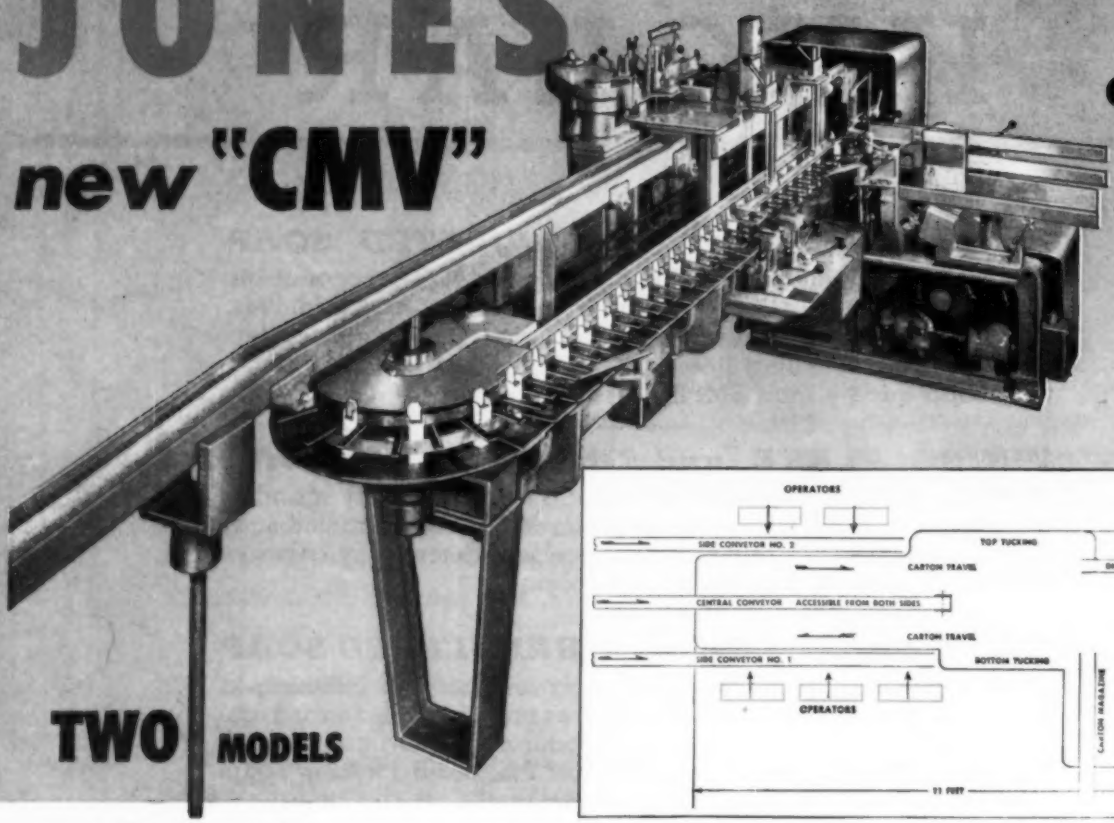
17th & Federal Sts. Camden 5, N. J.

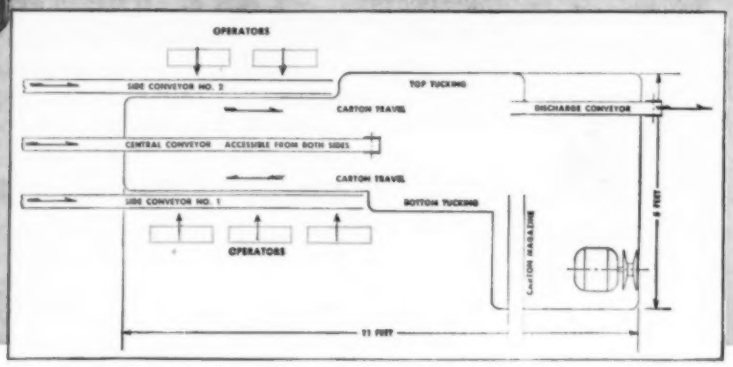
KNOLAR SOAPS

JONES

new "CMV"

CONSTANT MOTION VERTICAL





TWO MODELS

full range of sizes

The CMV takes the flat carton (reverse or airplane tuck) from magazine, opens the carton, tucks bottom flaps, conveys the open carton past manual loading stations, tucks top flaps and delivers the loaded carton. The new CMV is fully adjustable within the following ranges:

MODEL 4 — ½ x ¾ x 2¼ inches up to 3¼ x 3¼ x 8 inches

MODEL 5 — ⅞ x 1 x 2 13/16 inches up to 4 x 4 x 9 inches

Change over to different sizes is made in mere minutes — without special tools or skills.

IN THE THREE YEARS SINCE IT WAS INTRODUCED, the CMV has established an enviable record of versatility, efficiency and reliability. Retaining all the features which have made it the choice of scores of users, the *new* CMV offers these additional important advantages:

More operator space

By utilizing both sides of the machine, 5 operators may be used for higher speeds with multi-piece loads.

Less floor space

Measuring only 11 x 5 feet, the new CMV may be mounted on casters for ready portability from one line to another.

Flexible, straight-line infeed and discharge

Independently driven conveyors are available for infeed thru center, or along one or both sides of machine. Discharge conveyor can be lengthened to serve as packing belt.

R. A. JONES & COMPANY, INC.

Cartoning Machines — Soap Presses

JONES cartoning engineers are always available to help work out the FASTEST, most ECONOMICAL, most DEPENDABLE cartoning production line for YOU.

P. O. BOX 485, CINCINNATI, OHIO

. . . in brief

DOG FIGHT . . . The competitive dog fight for soap and detergents markets is not confined to America. A recent analysis of the United Kingdom market indicated that the current battle for supremacy is the fiercest Britain has seen in thirty years. The analyst points out that because the manufacturer's margin of profit is only five per cent, large tonnage and high turnover are vital. To build and maintain turnover, continuous expensive advertising and promotion are necessary.

Based on retail prices of packaged products, forty-five percent or more covers cost of production and packaging, according to this analysis. Advertising takes twenty-five per cent, overhead and distribution fifteen per cent, and dealer's margin ten per cent. This leaves five per cent or less for the manufacturer's profit, a figure dependent on everlasting and high-pressure promotion and selling, a figure which is rather skimpy for any long range operating program, and one which conceivably could be wiped out quickly by a market error or two. So heaven help the marketer who falls asleep even for one fleeting moment in the midst of such a dog fight.

•

RETURNS . . . Whenever any market has a prolonged period of declining prices, the problem of returned goods invariably rears its ugly head. The present market in soaps, cleansers and related items, particularly bulk products, is no exception. Manufacturers are being called upon to take back goods which have been in the hands of buyers for a year or longer. At the time of purchase, prices were higher than they are today. Otherwise, there would be no request that the maker take back the merchandise and credit the buyer with the full purchase price. Strange it is how a product can suddenly develop flaws in a declining market.

Because of numerous requests, some manufacturers are being forced to refuse returned merchandise, that is unless it is credited to the buyer's account at current prices. The producers realize that with every request to take back goods there is always an implied threat to future orders if they do not comply. But where the number and type of requests begin to border on the ridiculous, manufacturers are compelled to call a halt.

That the whole idea of returned merchandise, except for proved shortcomings within a reasonable time, is the brain-child of chiselers, seems quite obvious. The more they get away with it, the more often will they try it. But, it's for the manufacturers to stiffen their backbones and end the practice. Nobody else can do it for them.

•

VINYL FLOORS . . . Manufacturers and distributors of floor waxes are more disturbed by the advent of vinyl floor coverings than might appear on the surface. With the startling developments in plastics chemistry of the past few years, they fear that anything may happen,—even that floor waxes may be made obsolete practically over night. Vinyl floorings have a hard bright finish and according to their manufacturers, require no waxing to improve their appearance or protect them from excessive wear.

A committee of floor wax producers under the auspices of the Chemical Specialties Manufacturers Association is now planning to undertake a critical examination of vinyl floors. This is a natural step in self defense. But even if they find that vinyl is all that is claimed for it, there will still remain a few jillion miles of other floor-

ings in use for many a year to come. All linoleum, tile, rubber, wood and other floors will not be ripped up and scrapped overnight. At the same time, it is obviously best not to underestimate your competitor. Let's get the facts and then evaluate them.

•

WHITE SOAP . . . "It is good to note that the stupid fashion of 'pure' white toilet soaps is now on its way out. We hope that nobody will seek to revive it." Thus stated *Soap, Perfumery & Cosmetics,* our English contemporary, in its February issue. To this we might add an "amen." For some years, we have felt that white soap has been more a fetish among manufacturers than due to any great and overwhelming demand from consumers. Originally, we believe white toilet soap was put out to convey the idea of purity, and other manufacturers followed suit because they felt that competition demanded it.

That white toilet soaps upon occasion have been the bane of the soap perfumer's life and brought compulsory avoidance of useful perfuming compounds which cause discoloration are also pointed out. How true. The soap perfumer's style has been cramped for years, his skill directed mostly not to improving odor or creating new odors, but to avoiding first, last and always discoloration. So, we also note more colored soaps on the American market of late. Maybe the bonds are broken here also. Remember the fancy French soaps of yesteryear which retailed at such fabulous prices? Invariably straw, tan, pink, blue,—never white.

•

SALES . . . Early success has crowned the efforts of the National Sanitary Supply Association to establish a broad standardized plan for the education of sanitary supply salesmen. NSSA some months ago initiated a correspondence course for salesmen of its member firms under the name of Institute of Sanitation and Modern Cleaning Methods.

Previous means of giving much-needed training to salesmen have been confined to lectures, sales clinics, and the like, all obviously of a necessarily limited scope. The majority of salesmen in the field have had no opportunity to take advantage of such training. They have been out scrambling around their territories in quest of business and could afford little time to knock off for a week or two in order to be "trained."

The new mail institute plan of NSSA gives the average salesman a good opportunity to be better trained, sell more goods, and make more money for himself and his firm. The enthusiasm with which it has been received thus far augurs well for better selling methods ahead, something which everybody in the industry knows has been the single toughest problem yet unsolved.

•

MORE LAWS . . . As though we didn't have enough laws on the books already, it seems that Congress and most of the state legislatures once again are grinding out new ones as fast as the legislative mills can work. It being an odd-numbered year, most state legislatures are in session. Those which already do not have laws to hang around the necks of manufacturers and distributors of insecticides, disinfectants, rodenticides, and other "economic poisons," plan to correct the situation post haste. Others are stiffening old laws, boosting registration fees, adding new regulations, and in general making it tougher and tougher to do business at all.

In the midst of this blizzard of new legislation, including the Delaney proposals for amending the Federal Food, Drug & Cosmetic Act, there is one thing to be thankful for. There are only 48 states in the Union. When they all have their laws,—and they will,—things really will be in a hell of a mess for those firms unfortunate enough to do a national business in any product or products which come under this heterogeneous purview.

After twenty years, we have got the legislative habit of regulating everything regulatable. Eager beavers in every state legislature, not forgetting also the occupants of the hallowed halls of Congress, are out to "do something," to "protect" their constituents. They wouldn't know an insecticide from whipped salad dressing, but they undertake to regulate its formulation, sale, labeling and use. And there will be more. So, brace your feet, chums, the blizzard is here!

as the reader sees it . . .

A Small Soaper's View

Editor:

Writing letters to the editor and belly-aching are not among my hobbies.

You reproduced a letter in February SOAP, just received, under caption "Breaking his Heart", from E. O. Gillam of Gillam Soap Works, Fort Worth, Texas.

Mr. Gillam has on several occasions attempted to interest Congress in passing laws regulating the big soapers according to his ideas as to how this should be done. One time was before the Small Business Committee of the House of Representatives. I appeared there in vigorous opposition to his small soaper treatment vs. big soapers. He accomplished nothing there.

February 14, 1930 I spoke before the St. Louis Chamber of Commerce, Sales Manager's Bureau. I said in part ,"It matters not to me that mine is one of the small soap factories. As I see it, my business is to get ahead of myself, and not to get ahead of the other fellow. I do not fear the influence of Big Business. When sales are good with them, they are good with me. When they are suffering, I don't believe that I am suffering as much."

Now, 23 years later, I have no philosophy or ideas that could in any way cause me to withdraw that statement. Maybe I am more convinced of that than ever before.

I was on the Board of Directors of the Soap Assn. (Association of American Soap & Glycerine Producers, Inc.), for two years. I learned something about the workings of the minds of the heads of the Big Three in the soap industry, and I found no fault with that so far as I, a small soaper, am concerned.

The Big Three are not worrying me, but I am bothered by a lot of little soapers, some of whom came into the industry, as Black Marketeers. Then there are many janitor supply houses, many of whom need the money. You know what kind of competition that makes.

Well, I am afraid to deal with any man whose chief incentive to sell is the need to get money to pay debts.

CARTER POLAND,
Poland Soap Works,
Anniston, Ala.

We believe our sentiments were adequately expressed in the February issue of SOAP, and are glad to have Mr. Poland's reaction. He is one of the really small soapers and knows whereof he speaks.—Ed.

"I'm Telling You, No Other Floor Machine Has Power Steering and Two-way radio!"

Patent Date Correction

Editor:

Thank you for printing my letter in the February issue of *Soap and Sanitary Chemicals*. As you will note from my letter, the year of issue of U. S. Patent No. 2,353,753 is *1944*, and not *1941* as was printed by mistake. We ourselves made a minor error; the figure of the day given is wrong and should be changed from 19 to 18.

We would greatly appreciate it if you would insert a note of correction in the coming issue of the magazine, referring to my letter to the Editor and the cited patent and stating that the correct date of issue is *July 18, 1944*.

WILLIAM S. GUMP,
Sindar Corp.,
New York

Emery Not Empire

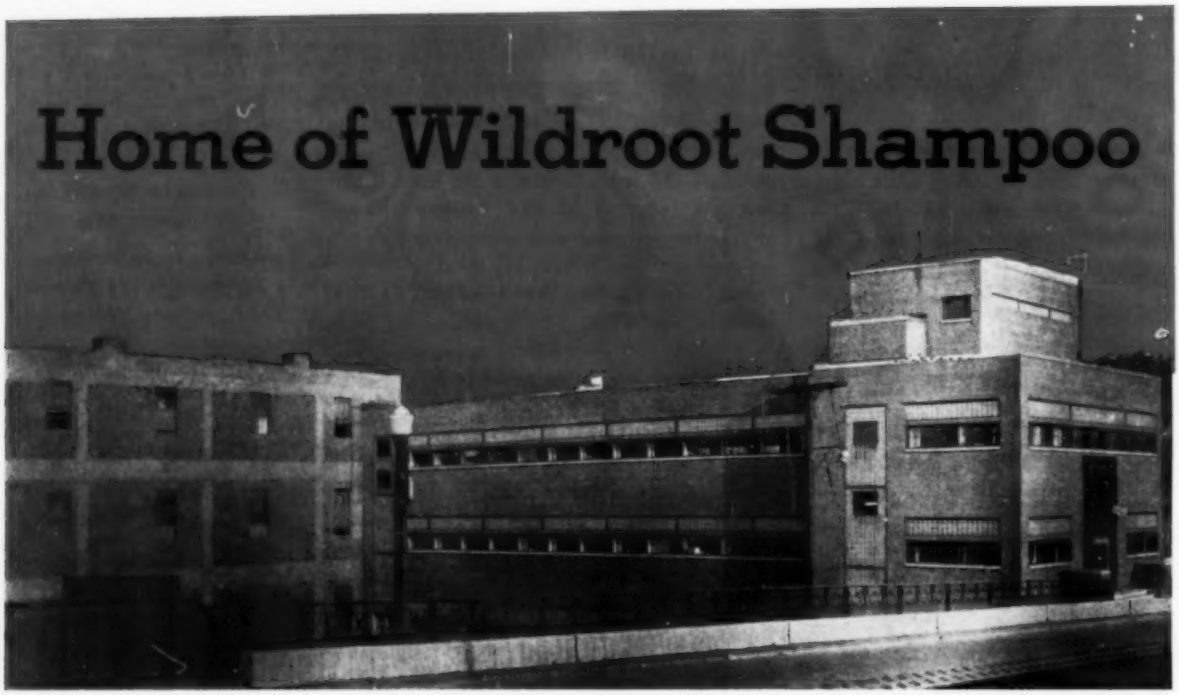
Editor:

In the January issue of *Soap and Sanitary Chemicals*, you carried an item in your column pertaining to Emery 955 Dimer Acid. I would like to call your attention to the misspelling of the word "Emery". Your column had it as "Empire 955 Dimer Acid".

We are certain that this is just a typographical error but thought that we should call it to your attention.

Very truly yours,
A. C. FUSARO,
Emery Industries, Inc.
Cincinnati

Home of Wildroot Shampoo



Plant of Wildroot Co., Buffalo, N. Y. (above) is in the shape of a "T". Building in right foreground is the three-story administration building, with front entrance facing Bailey Ave. Factory (at left) was first occupied in 1945. Offices were occupied two years later.

IN the huge plant of Wildroot Company, Inc., in Buffalo, N. Y., the "little brown jug" is accorded the same veneration usually bestowed upon Plymouth Rock or the Charter Oak. Like Plymouth Rock or the Charter Oak the "little brown jug" is both a memento and an historical symbol.

Actually, the term "little brown jug" is something of a misnomer. It isn't a jug at all. It's an earthenware crock. And it isn't little, unless one considers a five-gallon crock as little.

Aside from these minor technicalities, the "little brown jug" has gained more than local fame as the container in which Robert J. Kideney and Morrill C. Howe, then two barbers employed at the Hotel Iroquois in Buffalo, made the first batch of original "Wildroot Hair Tonic", a product which was to become well known throughout a large portion of the civilized world. It is particularly appropriate that this precious hunk of crockery should today rest on a shelf in the office of Bruce Kideney, vice-president in charge of Wildroot's manufacturing operations and a son of one of the company founders.

Wildroot Hair Tonic was first developed in 1909 by Kideney and Howe in response to numerous requests from their barber shop customers for a hair tonic that would be effective in checking dandruff. Ideas upon which their formula was based grew largely from their own practical experience as barbers, although they also sought the aid of consulting chemists in preparing the ingredients.

It seems likely that neither Kideney or Howe had any idea at the time they mixed their first batch of Wildroot Hair Tonic that they were launching a new and great business enterprise. It is certain that they would have been astounded by the transition from a five-gallon mixing crock to a manufacturing department with a bulk tankage capacity of more than 165,000 gallons, or from a slow, hand-filling and hand-labeling operation to high speed lines which turn out more than 300,000 bottles of Wildroot products each day.

Wildroot Hair Tonic was an almost immediate local success. Customers of Kideney and Howe liked the hair tonic. They told their friends about it, and the fame of the product spread rapidly by word of mouth. By 1910 the success of the new hair preparation was so great that both men left their shop to concentrate on the development of this market. And so a new business enterprise was ushered into the world.

In the early days of the company there was very little, if any, advertising and no sales organization. Sales were largely to the barber shops of Buffalo which in turn introduced Wildroot Hair Tonic to the public. Then, as the product became better known and more and more requests for home packages were received, retail packages were introduced for sale to the public through drug stores.

War Brings Growth

BY World War I Wildroot Hair Tonic had grown from the status of a strictly home-town product to one of national demand and distribution. Further expansion of the market was greatly accelerated during the war years by the fact that

thousands of young men from all parts of the country were brought together in training camps. Here knowledge of Wildroot Tonic was spread by example and word of mouth (probably the most effective of all forms of promotion), and many of these new users became lifetime Wildroot customers.

The same set of conditions, except on a much larger scale, prevailed during World War II and accounted for a tremendous increase in demand for Wildroot products both during the war years and in the period since the war. World War II, incidentally, brought some new problems to Wildroot's traffic department, mostly dealing with the shipment of products to service men stationed in all parts of the globe.

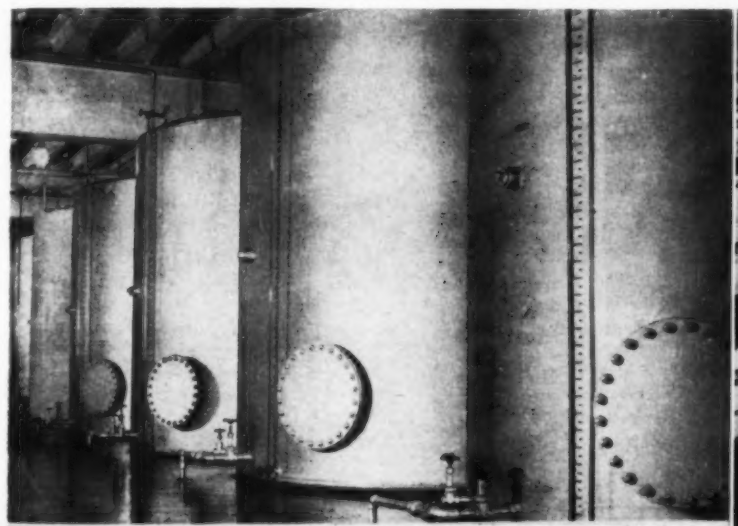
While the initial success of Wildroot Company, Inc., resulted from a single product, Wildroot Regular Formula Hair Tonic, officials of the company early decided to develop and market a full line of hair preparations. These developments, however, did not take place in a period of days or months. In some instances, new products required years of testing and perfecting before they were placed on the market. In fact, similar studies and experiments aimed at the development of new products are continuing today in the Wildroot laboratories.

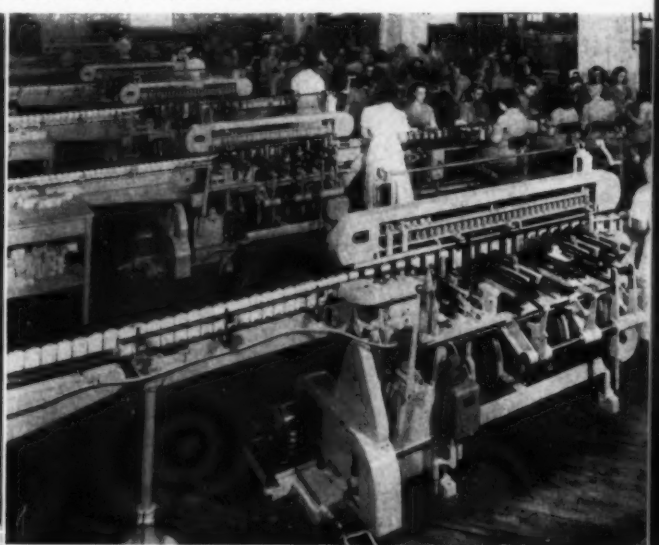
First steps in the development of any new product were consumer studies designed to find out what the public wanted in the way of hair preparations. Wildroot, Inc., has always been a firm believer in the importance of consumer research, which may be the reason why so many of its new products appear to be geared to public demand. Findings made through consumer studies are used to guide Wildroot research problems of laboratory experimentation and development.

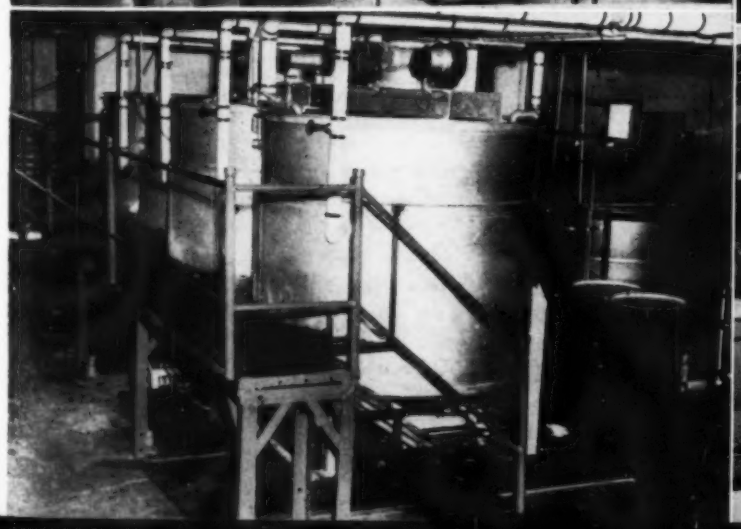
For example, when public preference shifted to a tonic with an oil base, the company conducted extensive laboratory research and brought out Wildroot with Oil. This product used the old and tried formula of Regular Hair Tonic as a base, plus oil for better hair grooming and the relief of dry scalp.

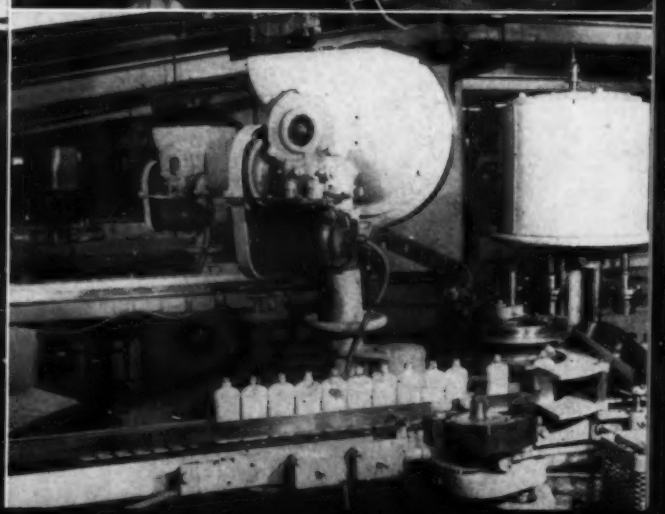
Similarly Wildroot Wave Set was developed to meet the needs for present day hair styling, particularly for use between permanent waves. The product was designed to eliminate flaking, one of the most common problems in wave sets. In addition to processed lanolin, Wildroot Wave Set contained algin.

Row of production supply tanks (upper left, below) in the Wildroot manufacturing department. Tanks, holding various raw materials, have a total capacity of more than 165,000 gallons.
Mixing tanks in bottom left photograph are used for Wildroot Oil. Each tank has a capacity of 780 gallons.
Labelers for six of nine bottle lines (upper right, below) in the Wildroot production department. The machines are Pneumatic automatic labelers which are capable of applying labels on two faces of each bottle simultaneously.
Photo at bottom right is of Consolidated four-spindle capping machine. Loose caps are poured into large hopper which in turn feeds caps into machine. Each cap is supplied with correct amount of pressure. Synchronization of the capper to the speed of conveyor line is supplied by a special Reeve control.









Other long time Wildroot favorites include Cocoanut Oil and Taroleum shampoos. Shampoo manufacturing is a lengthy process which includes prolonged cooking in a crutcher, filtering through approximately 15 thicknesses of canvas, chilling, and then an aging period of at least six months. It is apparent that careful planning is necessary in order that adequate supplies of aged shampoo will be available to fill orders at any time.

In 1937 Wildroot's research department recommended the development of a non-alcoholic, emulsion-type hair tonic. Leading consultants were called in to assist Wildroot's own research chemists and, after several years of experimentation and testing, Wildroot Cream-Oil was perfected. This was a cream emulsion type of hair tonic containing lanolin.

Another new product, Lady Wildroot Shampoo made its appearance on the West Coast in the fall of 1948. Consumer acceptance figures were so favorable that the product was introduced nationally in 1949.

In 1949 the Wildroot company agreed to manufacture and act as sales agent for Plasti-Liner, a dental plate reliner.

In 1950 Wildroot completed arrangements for the purchase of the Frostilla Company, manufacturers of Frostilla Fragrant Lotion, a product which had been almost a household word for more than 70 years. Modernized in product appearance and package, this time-tested toiletry preparation is again in and on American hands.

Based on previous research knowledge gained through the development and manufacture of Cream-Oil and other Wildroot products, a new formula designed especially for women was introduced in 1951. This was Lady Wildroot Cream Hair Dressing, the youngest member of the Wildroot family of products.

All in all, Wildroot manufactures 12 different products. These include Wildroot Cream-Oil Hair Tonic, Wildroot Regular Formula Hair Tonic (first of the line), Wildroot With Oil Hair Tonic, Cocoanut Oil Shampoo, Taroleum Shampoo, Lady Wildroot Wave Set (green or clear), Lady Wildroot Wave Powder, Lady Wildroot Cream Hair Dressing, Lady Wildroot Shampoo, Frostilla Fragrant Lotion, Quinine Bouquet, and Plasti-Liner (for dentures).

Merchandising Support

IT has been said that the four essential ingredients in the success formula of any consumer products are, (1) the quality of the products themselves, (2) an aggressive sales policy, (3) strong consumer advertising, and (4) hard-hitting point-of-sale merchandising. Wildroot stresses all four.

The Wildroot sales force of more than 80 selected salesmen is so distributed as to cover the entire country. Size of a salesman's territory depends upon a number of factors and is based primarily upon a thorough and continuing study of population and market trends.

The job of salesmen in the field is a dual one. Not only do they sell and obtain distribution for Wildroot products, but the proper distribution and placement of point-of-sale materials is an almost equally important part of their jobs. The primary purpose of the company's advertising, of course, is to create a desire for the company's products in the minds of consumers. It is the job of the sales force to make certain that Wildroot products are properly displayed in all retail outlets, so that the consumer is reminded to the point that he translates his desires into actual sales.

Wildroot's famous little brown jug, in which according to tradition, Robert J. Kideney and Morrill C. Howe, founders, mixed their first hair tonic.

Wildroot products are backed up with a consumer advertising program that has been consistently one of the largest, if not the largest, in this field. An advertising budget of more than $3,000,000 is scheduled for 1953 and includes all modern media —radio, TV, newspapers, car cards, magazines, trade journals, Sunday comics, etc.

Package Design Important

ONE of the more important but little heralded reasons for Wildroot's position in the hair preparations field has been its long-time realization of the importance of good packaging design in the promotion of its products. Though well established today in that field, sales officials of the company conduct a ceaseless search to find ways and means of improving their sales packages. To this end they consult with their own designers and with those of their chief bottle supplier to devise means of producing the best possible package for each product.

Possibly, in the initial stage of the company, when the first partners were selling their entire output of Wildroot Hair Tonic to the barbers of Buffalo, package design was not too important. The market was limited, and the primary purpose of packaging was to put the tonic in a container that could be handled by barbers, with a label which properly identified the product. However, when Wildroot went into the retail market, it found its packages in direct competition with other packages, and thus the need for improved packaging design became apparent.

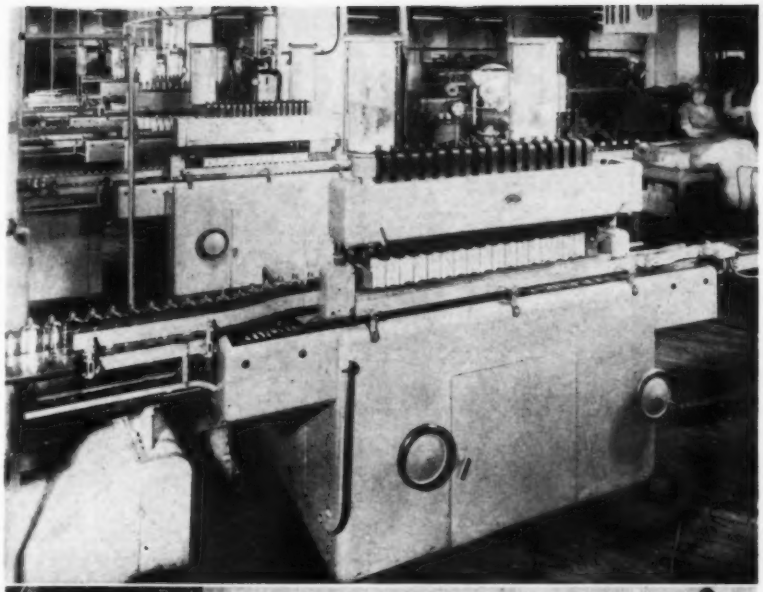
The earliest and most famous of all Wildroot packages was the one for its regular formula hair tonic. This had a long neck bottle of the type still preferred by barbers because of its ease of gripping, a shaker-flow finish and an ornamental glass stopper. The famous Wildroot label bore the profile of an Indian maiden. This package helped to make Wildroot Hair Tonic known throughout the country. Yet even this famous

Captions (top to bottom)

A row of straight line, fully automatic bottle fillers made by Pneumatic Scale Co. Seventeen bottles are filled at once on machines which have cyclic capacity of 120 bottles p.m.

Emanuel G. Gundlach, director of technical research, (left) and Emery Emerson, chemist, in laboratory in factory building.

Old and new Wildroot packages. Those at extreme left and third from left are early packages for hair tonic and cocoanut oil shampoo.



package has been re-designed on several occasions in accordance with progressive packaging trends.

Wildroot has not hesitated to re-design any of its packages whenever the times seemed to warrant a change. In some instances actual consumer tests have determined the sales appeal of two different styles of packages.

An example of Wildroot's constant search for improved package design is found in the Liquid Cream Shampoo package. The original package was a ribbed, pyramid-shaped bottle which was not particularly easy to grip because of the slant toward the top of the bottle. The label was near the base of the bottle where it did not stand out and might even be obscured on a store shelf.

The new bottle is shorter and more compact. It has a pinch-bottle shape for easy gripping by the most feminine hands. The label has been moved from the base of the bottle to the center for better identification. Even the colors on the label have been reversed to make the lettering stand out. The result is a more practical and eye-appealing package.

Any Wildroot packages to be considered acceptable must meet these criteria: (1) It must handle well in the company's modern, high-speed packaging lines; (2) it must be convenient in use by the customer, that is, it must be easy to open, easy to re-seal and easy to handle; (3) it must have sales force, that is, it must have something that catches the eye of the prospective customer and causes him or her to buy.

Plant Expansion

THE growth of the Wildroot company has been mirrored by the expansion of its manufacturing and

(*Turn to Page 79*)

CLEANERS for a

PICTURE a model community of 3,000 inhabitants, a city with ultra-modern conveniences of every description, with luxurious apartment-type suites, irreproachable cuisine, and touch-button service at all times.

Put this present-day Baghdad on the Atlantic, a serene combination of enormous strength and graceful beauty, plying between Pier 86 in New York, Southampton and Le Havre on the Continent, and you get the stirring image of the new liner *United States*, proud queen of the passenger fleets of all nations.

Like any model city, the *United States* uses large amounts of soap for cleaning the decks, galleys and living spaces aboard the liner, as well as for private uses by passengers and crew members. Large quantities of soap powders, liquid detergents, waxes and sprays are brought aboard in New York, some to be used in port, and the rest to be consumed at sea.

For before the superliner again leaves her pier, she is given a thorough cleaning from stem to stern. The operation is in charge of Fred W. Kocher, under the supervision of the Chief Steward, Hermann Muller. But cleaning operations do not end here, for on the voyage, the job aboard ship will be continuous, just as in any community where people live, work and play.

To handle the huge task, the Steward's Department has 730 people, of whom 33 are women. It also includes 44 porters for heavy cleaning work. Men work eight hours in a spread of 12, which allows them time for eating and recreation.

Water for cleaning purposes is drawn from the ship's fresh water supply. It is also obtained from the remarkable water distilling plant, which supplies the steam turbines as well as most passenger cooking and cleaning needs. The distilling plant utilizes ocean water which it purifies for human as well as engine consumption. Untreated ocean water is not used for cleaning aboard the *United States* because of its corrosive action, though it is used on other ships which do not have equal water resources.

Before going into details of the cleaning procedures, let's take a look at the vessel itself. The superliner is a product of the entire nation, and the result of seven years of careful planning, pre-testing and actual construction. Raw, finished and pre-fabricated materials from over 800 plants and companies were shipped to the yard in 1,500 freight cars, and tens of thousands of Americans in all ranks and trades from all 48 states had a hand in production.

Here are the vital statistics on the giant: width 101 feet, six inches; length 990 feet or roughly five city blocks; height from keel to funnel top 275 feet or that of the average 12 story building, and gross tonnage 53,330 or almost twice that of the next largest American liner. There are a total of twelve decks. Average speed is in excess of 30 knots. (On her maiden voyage to Southampton on July 3-8 she did 35.59 knots, and slightly under that on her return trip, new world records.) In addition to carrying 2,000 passengers, the *United States* has over 1,000 in her crew. In the event of emergency conversion to military service, she can transport

an Ocean Queen

By Louis Rosen

14,000 men or virtually a full division 10,000 miles without putting into port for food or fresh water.

Departures in design have developed from the need for power and potential speed, and have brought emphasis on light metals. As a result, the *United States* has the largest amount of aluminum of any structure on land or sea. Her giant 55-foot high funnels are the largest in the world and are all aluminum. The lifeboats are aluminum and fully fireproof. Below decks, aluminum has been used in bulkheads, elevator doors, shower stalls, and bathroom fixtures, and for all furniture as well as deck chairs.

The aluminum is of the "seagoing" type—a kind which has shown great resistance to salt water corrosion. The aluminum was also carefully insulated from other metals. The surface of exposed, bare aluminum has been protected by anodizing it.

Soap Washes Aluminum

PAINTED aluminum surfaces, with the basis of fire retardant materials, are washed with a mild toilet soap, using a clean cloth and water, followed by a rinsing of clear water. This procedure is also used on the enamel finish of the aluminum furniture which is used throughout the ship. Anodized aluminum or alumilite, with its protective finish, which also deflects excessive heat or cold, is utilized for the handsome deck caps on the railing of the promenade deck. These require no polishing, but do get a regular hosing down.

Now let's take a look at what the passengers have a chance to observe, and what they do to keep themselves occupied in the four-and-one-half day trip between Ambrose Light and Bishop Rock, for wherever people go, cleaning operations are sure to follow.

The floor surfaces continually traversed by 3,000 people confined to a limited area (if the equivalent of five city blocks can be so termed) require constant servicing. The hotel spaces, as they are called, include cabins, public rooms, passageways and stairways. All except the cabins, which have wall-to-wall carpeting, and some of the carpeted public rooms, have a flooring made of a slip-proof rubber tiling. Soap powder of a granulated type is used in a light solution of water for mopping these areas, followed by rinsing with clean water, and an application of a water emulsion type floor wax.

Generous space in the liner is devoted to comfortable and sometimes downright luxurious public rooms, the total amounting to 26. Topside on the sports deck are two broad game areas with neotex flooring, one amidship and the other at the stern, with facilities for deck tennis, shuffleboard and the traditional shipboard games.

Aft on the promenade deck is a third, raised, outdoor game area. The entire promenade deck is allotted to handsome and impressive public rooms including the observation lounge, ballroom, and cocktail lounge and two modern theatres, the largest of which seats 352. Outside this is the broad promenade, a glassed-in walk with windows from floor to ceiling giving, in storm and sunshine, an unobstructed view of the sea.

If you crave the quiet type of relaxation, you'll go forward to the

Observation Lounge with First Class Library and writing rooms adjacent to it. Here, two murals, instructive as well as decorative, carry out the "Sea Around Us" theme in sea-blues, sea-greens and gold. One shows the topography of the Atlantic Ocean floor, with applied bronze arrows indicating the prevailing winds in the area. The other shows the patterns of the surface currents, with arrows indicating their prevailing direction.

The carpet in the Lounge is a deep sea-green and the walls misty light blue, to complement the sea and sky. For curtains, there are six combined shades of blue and green raw silk, cotton chenille and wool threads. Interwoven are glints of gold, silver, blue green and copper metal thread. Many of the chairs are upholstered in hand woven materials in shades of blue ranging from dark blue to blue-gray to harmonize with the curtains. Some of the sofas and chairs are upholstered in light-blue leather and some in green. Desks, table and chair legs are covered with dark blue leather.

A stewardess cleans cabin of new super liner

Furnitaure Cleaning

CLEANING of the furniture in this and other public rooms is handled by an outside firm, which comes aboard when the ship docks. Modern dry cleaning methods are used on upholstered furniture, following a thorough vacuuming. The handsome leather chairs, in this public room as well as in most cabins, are polished with leather "food" or saddle soap.

Let us proceed to the spacious and impressive ballroom, the center of glittering social activity in the evening, while it becomes a lounge and cocktail room early in the afternoon.

All of the tables in this room are glass-topped with pale-gold pedestals, gold frames, and a wheel-spoke design in gold metal under the glass.

If you need conversation pieces to make conversation, you'll find them here in the Charles Gilbert panels. Carved out of glass these portray an undersea theme, part fantasy, part documentary, in the form of a fantastic sea garden.

If you're a man's man, you'll settle down in the smoking room, with its rich autumn colors. Dark brown painted walls are broken into large squares with copper-toned aluminum insets, and the floor carries a dark brown rubber tile pattern. Chairs are brown leather on the outside and copper colored leather on the inside, while the coffee tables have terrazzo tops in matching copper and beige. On the central wall you can inspect a Mercator projection of the four continents.

The two theatres have handsome and familiar lines, even to the slanting floors of green rubber tile. The First and Cabin Class Theatre is completely equipped with footlights and border lights, and is great for impromptu shows, as when Bob Hope was a passenger recently.

The Tourist Class theatre is slightly smaller, but also handsomely decorated. Non-skid wax which requires only a simple application is used on theatre floors.

Once you're aboard the liner, steaming out of the harbor, you'll find that home was never like this. Want a suit pressed? Ring for a bellboy. Need a workout? There's a gymnasium and swimming pool at your service. And for the ladies, there are three beauty parlors, so don't crowd please!

And pretty soon it's dinner time. This is one of the things you look forward to aboard ship because there's nothing like sea air to whet the appetite of any city dweller.

The spotless galleys, pantries and food storerooms, all stainless steel and aluminum, which can serve a total of 9,000 meals a day, are justifiably one of the chief prides of the liner, which is provisioned with more varieties and quantities of food than a large supermarket. Ultra-modern kitchen devices and a full stock of equipment provides fast service. They also provide for above standard sanitary cleaning of all wares.

The motto of the galleys is to serve any passenger any dish he may desire. Besides the choices on the regular menus, it's possible to order your favorite meal, whether shish-kebab or hach-pooie. There are many departments in the galleys, each with its own specialties and assistants. Included are grills, vegetable preparation rooms, butcher shop, pastry shop, bake shop, main pantries, meal bars, sculleries, dish, silver and glass washing room, ice cube room, refrigerators, refrigerated ship's storage spaces, and commissary elevators. In addition there are a number of special pantries and service bars for areas like the

Quartermaster shines engine order telegraph

main public rooms and the ship's medical quarters.

Among other wonders are the two electronic radaranges which can cook a filet mignon to order in one minute and twenty seconds. A baked potato, ordinarily a 45 minute job, takes one minute and 15 seconds with this equipment, which has 2,000 volt power and safety automatic cut-off.

The all stainless steel and aluminum, and fully-equipped galleys, have over 15,700 individual pieces of equipment to prepare food for passengers. Food is served by means of a huge stock of utensils which includes 58,688 pieces of hand-blown glassware, 72,700 of silverware and 95,172 of chinaware. Many of the dishes are being constantly replaced because of breakage. There are also vast numbers of standard kitchenware items, such as knives, frying pans, heavy aluminum roasting pans and stainless steel skewers.

In common with other areas, the galleys have non-skid tile decks. A liquid soap solution noted for grease removing ability, and having a cocoanut oil base, is used here. The galleys are scrubbed and mopped up with warm water, and then gone over again with a dry mop. The water and any possible food scraps flow into scuppers and runways, then into drainways, where they are gathered in a tank arrangement in the engine room and released overboard.

Sanitation Standards

SANITARY standards in the galleys are at a high level, and Public Health Service requirements are carefully observed. These include a double arrangement of sinks in each pantry, one for soapy water rinsing and one for sterilizing of dishes. Steam connections bring water boiling to temperatures of between 170 and 200 degrees, removing the grease. Then, using a basket removal arrangement, dishes are transferred to another sink which operates at 210 degrees. The hot water dries the dishes without the use of towels.

There are separate rooms for glass washing, dish washing and silver washing. All use the same granulated detergent. Men are assigned to each room, about six to eight for each. Dish washers, as you probably suspect by this time, have a full-time job. This is apparent from the magnitude of the job of serving 1800-1900 passengers and 1000 crew members three meals a day.

The huge pots and pans are the hard-core problem of the galley cleaning section. In spite of new detergents and live steam baths, it's still hard to remove the heavy grease from pots and pans after roasts and fried foodstuffs are cooked. Pot-washers, the hard-working privates of the line, sometimes throw in the dish-cloth after one voyage. To lighten the work load, Mr. Kocher, cleaning superintendent, keeps an open mind about grease-cutting detergents. He's always in the market for one that will do the job better.

When it comes to living quarters, the passenger has new superior accommodations. The 694 passenger cabins of all classes show careful designing, with special consideration given to please the ladies. All cabins have full-length mirrors and wardrobes, dressers with round-edged drawers which never stick, bed lamps, dressing tables and wall-to-wall carpeting.

The majority of cabins have a fair-sized bathroom, with shower and toilet and washbasin and Kleenex is available in dispensers in each bathroom.

The new superliner is also "climate controlled" throughout to suit tastes of individual passengers. More than 60 individual air-conditioning systems are kept in balance by automatic relay devices and control systems. The system comprises about 1,000 different size and shape ducts, varying in diameters from three inches to one large enough to drive a truck through. Even the dog kennels are completely air-conditioned and provided with thermostatic climate control regulation which will make Pluto bark with pleasure.

If money is no object, the liner offers super-special spacious de-luxe suites, with luxurious rooms, rich furnishings and unusual facilities. The rooms of these suites are unequalled in size by any other luxury liner. Some of the suites consist of extra-large living rooms joined on either side by generous-size bathrooms. These units are supplied with three full baths, dressing room, and trunk room. The furnishings are unified by attractive color schemes, carried out in carpeting, upholstery and curtain fabrics and the harmonizing tones of the furniture. Original art decorates the walls, and music can be piped in from the ship's orchestra or from records by pressing a button. You can also get room service by ringing the steward or stewardess, and if you are still worried about things at the office, you can pick up the phone in your cabin and get connected with almost any place in the world in a jiffy.

Carpet Cleaning

CARPET cleaning and furniture cleaning is handled by an outside contractor who comes aboard with his crew when the ship docks in New York. Carpets are shampooed with an electric scrubbing machine, after vacuuming is completed. Most soilage is caused by such things as coffee and juice stains. During voyages, the rooms are cleaned daily by the bedroom stewards.

As the ship docks, exterminа-

(*Turn to Page* 201)

Nonionics—The All-Surface

In comparing performance of the ionic and nonionic detergents it was reported by Mr. Fineman that the nonionics were superior in removing soil from both glass and metal substrates, and that the nonionics were good soil suspending agents whereas both anionics and cationic materials were "quite poor" in this respect. Ed.

Wetting Phenomena

THESE results are in sharp contrast to the popular belief that any surfactant which lowers surface or interfacial tension should be a good detergent—presumably because it aids wetting, spreading, emulsification or a combination of these phenomena. Instead the data confirm the observations of Reich and Snell (3) whose work on diphase metal cleaners indicated that preferential wetting of the substrate by the detergent solution was a prerequisite to cleaning. Moreover, where energy considerations at the interface between soil, solution and substrate were such as to promote preferential wetting of the substrate by the oil phase, they demonstrated that the detergent would promote soiling and soil redeposition rather than cleaning.

This hypothesis was corroborated by examination of the contact angles of detergent solutions on metal and glass substrates wetted by, and immersed in, oil. Droplets of these solutions were deposited on the substrates under oil; and their height and diameter at the base determined by means of an eyepiece micrometer. From these droplet dimensions the contact angles could be determined readily. Contact angles which are less than 90° signify preferential wetting of the substrate by the aqueous phase whereas angles greater than 90° signify wetting by the oil phase. The measurements reported in Table II were obtained with the exercise of reasonable care, but without the excessive precautions which are often required for this type of work. Nevertheless, the results were surprisingly reproducible, as indicated. The data reveal that although the anionic surfactant (Triton X-200*, a representative alkyl aryl polyether sulfonate) preferentially wet the glass, it promoted preferential wetting of metal by the oil phase thus accounting for the soiling of metals and soil redeposition observed with some anionics.

Table II.

Contact Angles of Surfactant Droplets on Substrates Under Oil

Surfactant Solution	Glass	Steel
Distilled Water	100°	129°
1% Anionic B	63	107
1% Cationic A	124	(90-130)
1% Nonionic A	53	72

Tan $\Theta/2 = 2H/D$
For Water, Standard Deviation for 15 determinations = 4.6°

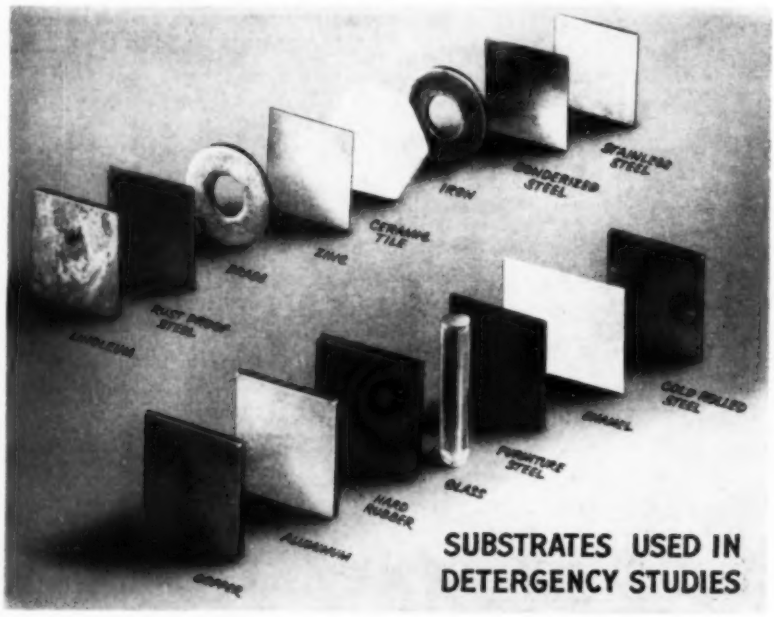
Similarly the cationic surfactant (Hyamine 1622*, a representative alkyl aryl polyether quaternary ammonium salt) caused preferential wetting of glass by the oil phase, and, therefore, promoted soiling of that substrate. The contact angle data confirm that the ionic surfactants are sensitive to the nature of the substrate and may interact with it to promote soiling rather than cleaning.

The contact angle data also reveal the unique nature of the nonionic surfactant (Triton X-100, a representative alkyl aryl polyether alcohol). That surfactant was apparently less restricted than the ionic materials by the polar or electrostatic characteristics of the substrate and, consequently, it promoted wetting of either type of substrate by the aqueous phase. Therefore it cleaned both types of surface equally well. These observations were further sustained by examination of the performance of these materials on a wide variety of different substrates; and showed that the nonionics were truly the all-surface cleaners.

Reich and Snell explained the interaction of anionic surfactants with metals by noting that the anionics could hydrolyze to produce free fatty acid which would adsorb on metal and promote preferential wetting by the oil phase. With fatty acids in the soil

* Tritons and Hyamines are products of the Rohm & Haas Co.

Figure 9. Substrates Used in Detergency Studies



Cleaners

By
Manuel N. Fineman*

Research Laboratories
Rohm and Haas Company
Bridesburg, Pa.

Part II

they believed that nonionics would be ineffective and that only alkaline salts, which would react with the fatty acids to form soaps and repress hydrolysis, would be satisfactory as metal cleaners. Our experience has been to the contrary. We added two percent oleic acid to our oily-carbon soil and, although this addition further reduced the efficiency of anionics and of water, it did not affect the superior performance of the nonionics as metal cleaners.

Preferential wetting of substrates by the oil phase is undoubtedly due to adsorption of the ionic surfactants in such a manner as to produce a hydrophobic surface on the substrate. This can be readily demonstrated by dipping a clean glass plate in a solution of a cationic surfactant and then, upon removal of the plate, noting the rapid drainage of water from the hydrophobic surface of the glass. Similarly soap molecules adsorb on metal to give an apparently hydrophilic surface—but this has been attributed to adsorption of a double layer of soap molecules (4). The outer hydrophilic layer can be readily rinsed away, leaving a hydrophobic surface on the metal.

It may be conjectured that the nonionic surfactants adsorb on both metal and glass in such a way as to produce a hydrophilic surface. For example, a clean glass plate, dipped in a solution of a nonionic surfactant, drains so slowly that water is lost more rapidly by evaporation than by drainage. Molecules of solute, deposited out of solution due to evaporation of the solvent, may be observed in the form of a visible film on the glass.

Performance on Different Substrates

SINCE the test method permits determination of the efficiency of different surfactants on a wide variety of surfaces, we selected some representative detergent formulations and investigated their efficiency on 20 different substrates—11 of which are reported here. Some of these substrates are shown in Figure 9. They included metals, alloys and ceramic tile which are relatively easy to clean as well as linoleum and plastic which are somewhat more difficult. The detergents included two representative nonionics with slightly different solubility characteristics, a typical alkyl aryl sulfonate, an alkaline cleaner,* and water. In addition three built formulations, comprising 95 percent alkaline salt and five percent of each of the surfactants, were made up and examined. In every case, substrates were tested in duplicate and at each of five detergent concentrations ranging from one percent to 0.01 percent.

The data are reported in Figures 10 to 20 and reveal some surprising differences not only between detergents but also between substrates. Ceramic tile and iron washers, were cleaned rather effectively by most of the detergents. Differences between detergents became discernible on stainless and furniture steels; and these differences became more marked on aluminum, zinc, copper and brass. Moreover, with few exceptions, they seemed to follow a definite pattern.

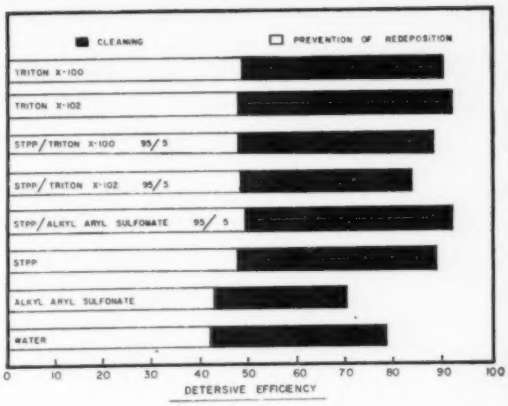


Figure 10. Detersive efficiency of surfactants on tile.

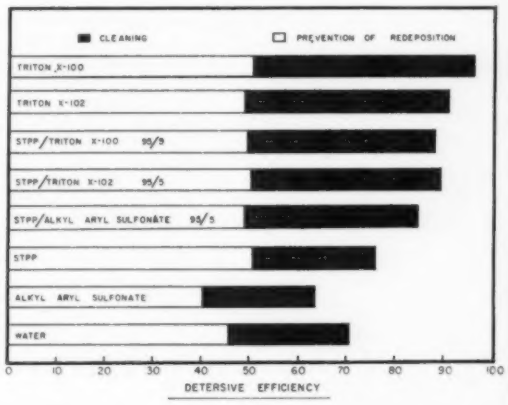


Figure 11. Detersive efficiency of surfactants on iron washers.

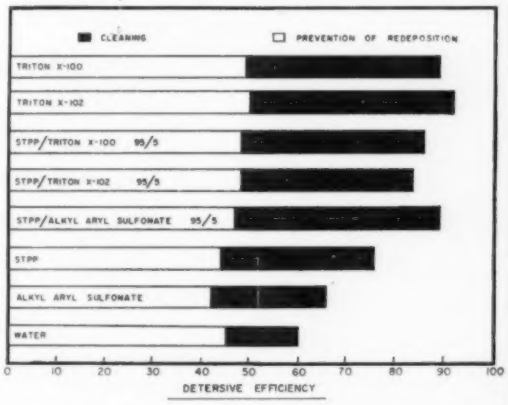


Figure 12. Detersive efficiency of surfactants on stainless steel.

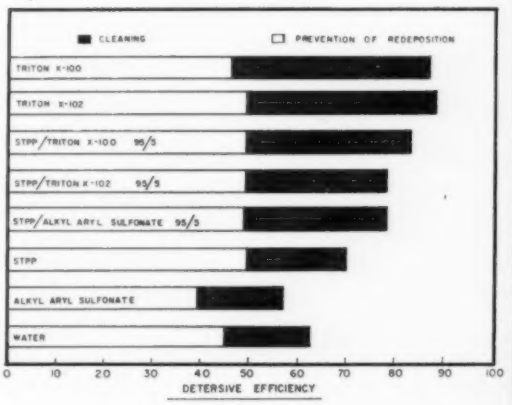


Figure 13. Detersive efficiency of surfactants on furniture steel.

* Presented at 39th annual meeting of Chemical Specialties Manufacturers Association, New York, December 8th, 1952.

* Sodium tri poly phosphate (STPP).

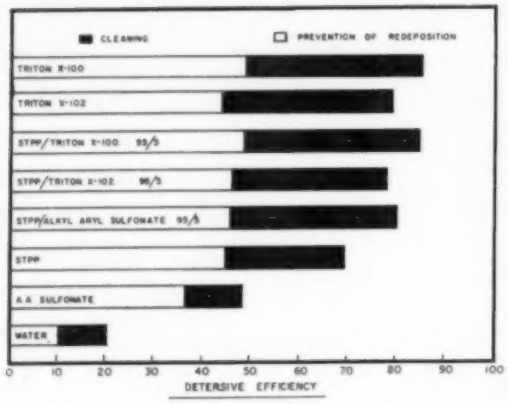


Figure 14. Detersive efficiency of surfactants on aluminum.

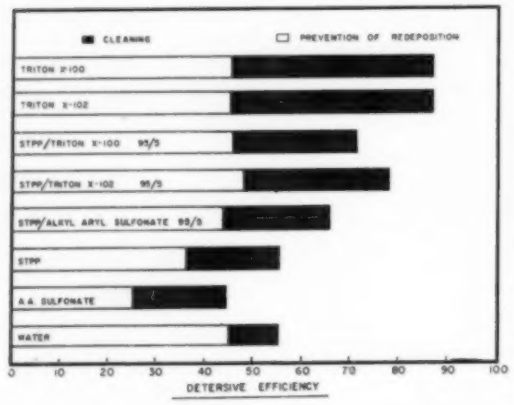


Figure 15. Detersive efficiency of surfactants on zinc.

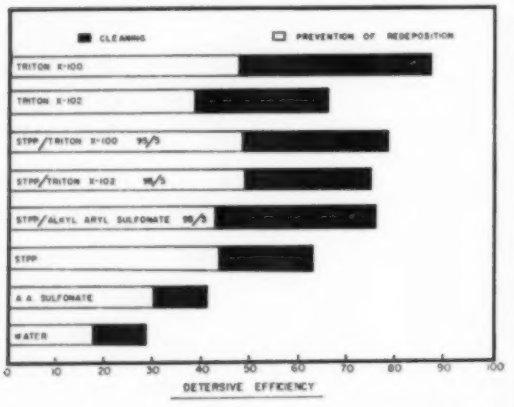


Figure 16. Detersive efficiency of surfactants on copper.

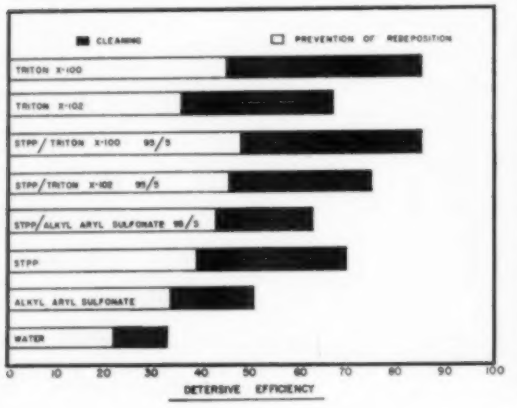


Figure 17. Detersive efficiency of surfactants on brass washers.

Built and unbuilt nonionics were uniformly superior to the alkyl aryl sulfonate and the alkaline salt. With linoleum and silver, only the nonionics were effective; and, on melmac, only one of these nonionics.

In many instances it may be noted that the anionic surfactant was even less effective than water alone. In view of our earlier analysis of the interactions possible between anionics and metals to promote soiling rather than cleaning, this observation should not be surprising.

A direct comparison of the efficiencies of the nonionic and the alkyl aryl sulfonate on all eleven substrates is shown in Figure 21. This chart clearly reveals that the nonionic is by far the better of the two, and justifies our reference to it as the all-surface cleaner. Incidentally, it may be noted here that other anionic surfactants such as alkyl sulfates, soaps, etc., are essentially similar to the alkyl aryl sulfonate in their performance on these substrates, and are generally inferior to the nonionics.

Summary of Efficiencies of Detergents

A FINAL tabulation permitting a direct comparison of the eight detergent formulations is shown in Figure 22. This chart was obtained by calculating average percentage efficiencies for each detergent on *all* substrates and relating these averages to the values obtained for water on the same surfaces. This graph is of immeasurable practical value since performance of detergents is reported in terms of percentage efficiencies *greater than* that of water.

It is apparent that neither the alkyl aryl sulfonate nor the alkaline salt was much better than water alone. When these two were mixed, however, a synergistic effect was noted and their performance was improved somewhat. However, their average efficiency was still appreciably less than that of the nonionics or nonionic/alkaline blends. In fact one of the nonionics was so superior as a detergent that it came close in performance to that of the ideal material—which would have a perfect score on all substrates at all concentrations.

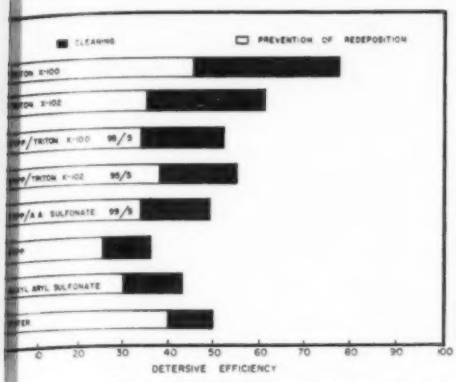


Figure 18. Detersive efficiency of surfactants on linoleum

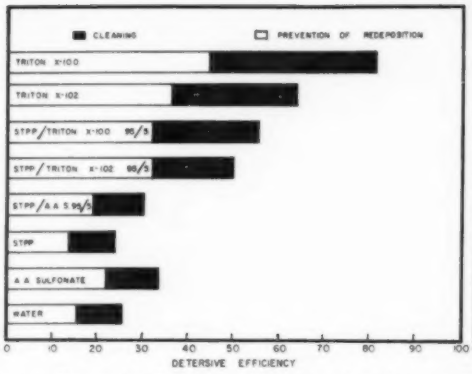


Figure 19. Detersive efficiency of surfactants on silver

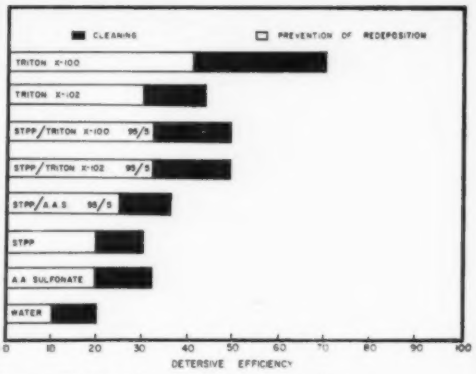


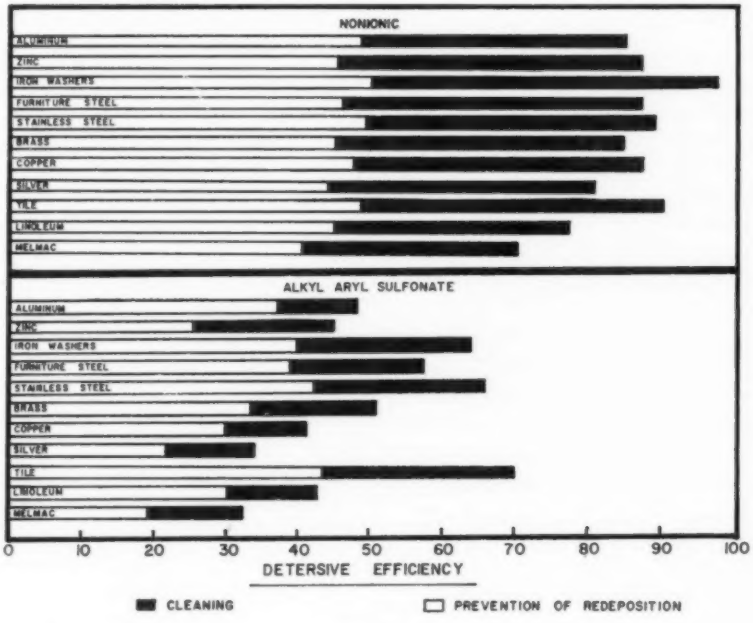
Figure 20. Detersive efficiency of surfactants on melmac

Although this graph represents the averages of 55 duplicate determinations for each surfactant and, therefore, is quite representative of overall surfactant efficiency, it must be borne in mind that it is only meaningful for the particular oily-carbon soil used and for the particular test temperature employed. Consequently it is useful for comparative purposes only and should not be interpreted as indicative of efficiency of these detergents on other soils or at other temperatures. In recent months we have directed our efforts to investigations of these variables and have found that performance is generally similar to that reported here. This work will be described more fully in a future communication.

Alkaline Salts and Blends

ALKALINE salts such as the complex phosphates and silicates, the sulfates, carbonates, and alkali, have long been used with success as cleaners in a wide variety of applications involving hard surfaces. Very often surfactants have been added to these salts to help in "wetting-out" either the soil, or the substrate, or both; and, in these cases, it has been common to refer to the alkaline portion of the formulation as the "builder." This term strongly implies that the role of the alkali is to assist the surfactant in the detergent process; however, our work would indicate that the reverse is probably closer to fact. As shown in Figure 23, the inorganic compounds were themselves excellent detergents for some surfaces. In fact, on metals, they were superior to the anionic surfactants. Presumably the alkaline salts promoted preferential wetting of metals by the aqueous phase and these complex wetting phenomena must account for the synergistic effects occasionally observed with anionic/alkaline blends.

Figure 21. Comparison of efficiencies of Nonionic and Anionic Surfactants



Although the alkaline salts were quite effective in cleaning soiled metal or glass—and in protecting these surfaces from soil redeposition—they were completely ineffective in cleaning the soiled plastic substrates, or in suspending the removed soil in finely dispersed form. For this purpose the nonionics are uniquely effective.

Consequently various blends of nonionics with representative alkaline salts were examined to determine the optimum formulations for maximum efficiency on representative metal, glass and plastic substrates. As shown in Figure 24, relatively small quantities of nonionic were sufficient to raise the efficiency of the alkaline salts quite appreciably. Assuming that prices of nonionic and alkaline salt are 36¢ and 8¢ per pound, respectively, the final graph, Figure 25, shows that use of such nonionic/alkaline blends can produce superior detergency per unit cost than either nonionic or alkaline salt alone.

(*Turn to Page* 114)

Compounded Deterge

DONALD PRICE

SOAP is practically the only detergent that is used alone. Almost all of the cleaning materials on the market today, either for household or industrial use, are mixtures. Even the synthetic detergents and other surface active agents used in such large quantities in the textile industry generally have substantial proportions of sodium sulphate mixed with them. There is a good reason why it is advantageous to use mixtures rather than single cleaning materials. Detergents are a lot like people, they generally behave themselves better in company than when they are alone.

As we all know even soap gets mixed with other things. In fact the basic idea for the heavy duty built detergents of today grew out of the use of additives to soap in laundry practice. It has long been the custom in laundries to add alkalies or alkaline salts, known as builders, to their soap to improve its detergency. Since such substances are generally cheaper than soap, the laundry owner gets more cleaning for less money. When the synthetic detergents appeared on the scene, it was only natural to try out the effect of builders upon them, too. The highly efficient all-purpose household detergents of the present day have resulted from experiments in this direction.

The reason why heavy duty household detergents do so many cleaning jobs so well is because they are compounded detergents. The use of a mixture of ingredients makes it possible to build so many desirable properties into them. The first step in compounding such a detergent is to select a synthetic with good detergent power. We must then add a good alkaline builder, or perhaps several of them, so as to improve detergency still further. If we select one of the polyphosphates for the purpose we also improve the performance of the mixture in hard water. Redeposition of soil on fabrics may be prevented by adding such substances as carboxymethyl cellulose and finally the addition of brighteners or optical bleaches will offset the yellowing of white fabrics and give brighter colors to colored ones. The good performance of such detergents is due to the combined action of all the ingredients of the mixture.

On the other hand, even when it is not mixed with anything else, soap is a very versatile cleanser. It has held the center of the stage and has done a fine job for a great many centuries before the synthetics were ever heard of and even with the competition of the high-powered blended detergents it is not doing too badly.

But some people seem to be rather pessimistic as to the future of soap. One of the chemists in my laboratory came to me the other day and said, "Doc, if the trend toward synthetics keeps on it won't be many years before children will be saying, 'Daddy, what was soap?'." I don't believe this day will come. Although I think very highly of the built synthetics, especially for hard water use, I am one of those die-hard conservatives who believes that soap is hard to beat and will always hold a foremost place in the detergent field.

It is not my purpose to discuss consumer products but rather to talk about another class of compounded detergents, the so-called industrial cleaners. In general, there are two reasons for cleaning in industry, maintenance and production. The purpose of maintenance cleaning is to keep equipment in suitable condition for use, in other words, good housekeeping. This may mean maintaining the attractive appearance of the equipment, as when railroad passenger coaches are cleaned, or it may mean maintaining sanitation, as when food processing equipment is cleaned. Production cleaning on the other hand, as its name implies is a step in manufacturing. We often overlook the fact that cleaning is an important industrial operation. For example, every metal part that goes into an automobile is cleaned at least once and often several times during fabrication before it can become part of the finished car.

Need for Cleaning

THE need for maintenance cleaning should be clear enough. It is like the cleaning that goes on every day in the household. Pots, pans and dishes have to be washed after every meal if we are to avoid the contamination of food. Floors have to be scrubbed periodically and walls and bathroom tile regularly washed in order to maintain the attractive appearance of the home. The same principles hold true for industrial maintenance cleaning. When a modern streamlined train like the "20th Century Limited" pulls into the station at the end of a run, it is covered with dirt picked up along the way and must be cleaned inside and out. Passengers would hardly be satisfied to pay extra fare to ride on such a train if they saw its sides caked with dirt when they got aboard. A cleaning crew takes the train over in the yards and each car is scrubbed with a solution of a suitable cleaning material or the train is passed through an automatic car washer. What has been said about railroad cars is equally true of airplanes, busses and trucks. Maintenance cleaning is an important feature of their operation.

But keeping equipment looking attractive is not the only reason for maintenance cleaning. An even

e:rgents

By Dr. Donald Price* Oakite Products, Inc.

more important reason is to maintain sanitary conditions in the interest of public health. For example, in dairies, the pasteurizers, holding tanks, piping and other milk processing equipment must be thoroughly cleaned and sterilized after each day's run to prevent high bacteria counts in the milk that would result in its rejection. Equipment in food processing plants such as bakeries, canneries and packing houses must be kept clean to prevent contamination of the food. The cleaning practices used in plants where food and beverages are processed for human consumption are carefully regulated by local, state or federal authorities.

As we have already indicated, the importance of proper maintenance cleaning should be obvious to almost everyone. However, the importance of production cleaning may not be quite so obvious. Why is it that the great majority of articles have to be cleaned one or more times during the course of their manufacture? There are many reasons. Parts are sometimes cleaned so that they may be inspected and their dimensions checked; manufactured articles are sometimes cleaned as a final step to give them sales appeal on the dealers' shelves. But the principal reason for industrial cleaning is to prepare the surface of the part, or article for the application of a finish of one kind or another. The finish may be a paint, a lacquer, an electrodeposited coating or vitreous enamel. Production cleaning is mostly metal cleaning and in reality constitutes surface preparation of the metal to receive the final protective or decorative coating.

Up until about the time of World War I, cleaning was done with simple raw chemicals such as caustic soda, soda ash or caustic potash and sometimes even with such malodorous substances as whale oil soaps. With wages so much lower than today, production cleaning was no great problem in those days. Even the simplest cleaner will do a tremendous number of different cleaning jobs if one can afford to employ workers to scrub and polish the work by hand.

This was all very well in the days before assembly lines when manufacturing operations were slower and simpler, but today the cost of cleaning by hand is prohibitive. It is now common practice to hang parts on a moving overhead conveyor line and pass them through tanks of the cleaning solution or through pressure spray washing machines. There must be no soil or oily films left on the work to interfere with the application of the subsequent finish and to cause it to peel. Not only this, but manufacturers are constantly striving to reduce the time during which the parts are in the cleaner solution so as to increase production but at the same time get as good a job as ever. Accordingly, modern industrial cleaners have to be efficient and fast-acting.

Industrial Cleaning

INDUSTRIAL cleaning operations are extremely varied and each one presents problems peculiar to itself not only because of the kind of soil to be removed but because of the nature of the surface from which it is to be removed. We may be confronted with the simple problem of removing a light anti-rusting oil from steel or we may have to deal with that of taking off a heavy drawing compound ground into the metal during forming in the press. Or again we may be confronted with the problem of removing buffing compounds from the zinc die castings used for automobile hardware. In this case the organic ingredients of the buffing mixture are not only ground in but are partly decomposed and oxidized due to the heat generated in the buffing operation. Not only do we have to deal with a tenacious soil that resists the action of cleaning solutions but with a metal that is very sensitive to attack by harsh chemicals.

It is plain that industrial cleaners have to be specialized to meet the widely varying demands of different industrial operations. In fact they must be tailor-made for the kind of job they are intended to do. A cleaning material suitable for removing heavy grease and carbon deposits from a motor block during motor truck overhaul would scarcely be suitable for cleaning aluminum before painting or cleaning brass before electroplating.

The compounding of industrial cleaning materials calls for a great deal of skill and exacting laboratory research. Furthermore, success in the field depends upon a wide practical knowledge of industrial processes. There is a common belief that making industrial cleaners is easy and involves no more than the mixing of a few simple chemicals. This viewpoint is no doubt a carry-over from the early days when cleaning was done with simple raw chemicals and lots of hand labor. But many a novice has paid a high price in spoiled work and lost time to learn the contrary. Many factors complicate the problem of compounding industrial cleaners the most important of which are, the great complexity of the soils to be removed and the sensitivity to chemical attack of many surfaces that must be cleaned.

The major ingredients that go into industrial cleaners are alkaline salts, although the alkalis, caustic soda and caustic potash are quite commonly used. These alkaline salts include soda ash, modified soda, silicates such as sodium orthosilicate and sodium metasilicate and about all of the commercially available phosphates and polyphosphates. I have also learned from what are usually reliable sources that some cleaning materials even contain trisodium phosphate.

The compounding of these basic ingredients is not without its difficulties. Needless to say the combination of ingredients must be chosen so as to accomplish the purpose for which the cleaner is intended, namely to remove a particular kind of soil without injuring the surface being

(*Turn to Page 77*)

* Paper presented before 26th annual meeting Assn. Amer. Soap & Glycerine Producers, New York, Jan. 29, 1953.

"Peter Pan" Beauty Bar, the newest soap with chlorophyll, is being introduced nationally by Colgate-Palmolive-Peet Co., Jersey City, N. J., with two special premium offers. A Walt Disney "Authentic Peter Pan Adventure Map" is offered for three wrappers from "Peter Pan" soap and 15 cents. Also, a "Peter Pan" doll set is being offered having a retail value of $4.95 but is obtainable from Colgate for $3.00 and six "Peter Pan" soap wrappers. If a dealer orders 10 cases of "Peter Pan" soap and displays the soap, he receives a free doll set.

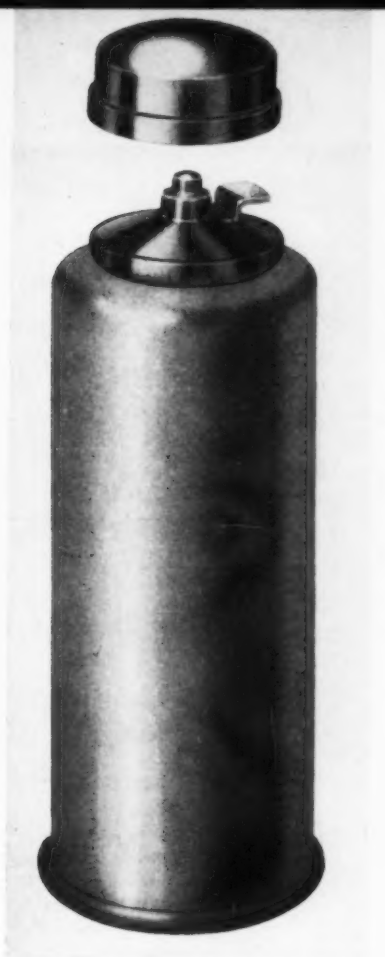
"Deocide" glycol aerosol, perfumed with spice odor, has been added recently to its line by Uncle Sam Chemical Co., New York, for sale to sanitary supply jobbers. Special introductory offer for jobbers in quantities of one dozen. Twelve-ounce container is manufactured by Crown Can Co., Philadelphia; valve by Precision Valve Corp., Yonkers, N. Y.

National Laboratories, Inc., Toledo, O., has designed a new "N-L Spot" bottle for applying its concentrated cleaning material. The "N-L Spot" 16 ounce bottle features ceramic applied label and instructions, and is equipped with a plastic sprayer. Lines on the bottle allow user to determine the amount of "N-L" concentrate that is placed in the bottle before water is added.

What's

Latest aerosol brushless lather cream, "Close-Up," has recently been introduced by Lentheric, New York. The six-ounce container and cap are produced by Crown Can Co., Philadelphia. The unit is designed to provide enough lather for at least 30 shaves. "Close-Up" retails for $1.00.

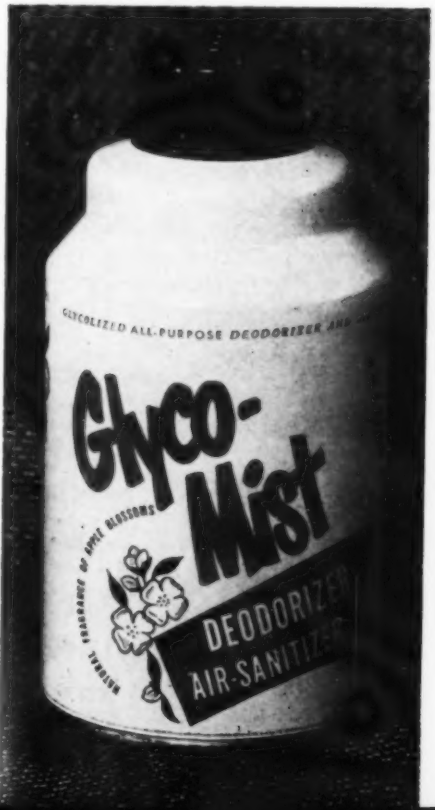
"Linco" ammonia with suds is being packaged in a new quart bottle with closure and revised label design, Linco Products Corp., Chicago, recently announced. New bottle replaces the old fifth bottle (25.6 ounces). Owen-Illinois Glass Co., Toledo, O., manufactures the "Duraglas" containers and yellow metal closures; yellow, blue and red label designed by Owen-Illinois, printed by Thomas Printing Co.



New dispensing aerosol valve recently introduced by Risdon Manufacturing Co., Naugatuck, Conn., includes these features: a flexible metal diaphragm and valve seat, made of nylon or teflon; and the proximity of the secondary orifice to the terminal orifice, minimizing possibility of clogging.

New?

James Varley & Sons, Inc., St. Louis, recently brought out "Glyco-Mist," in the new "Spraytainer" aerosol dispenser made by Crown Can Co., Philadelphia. New 12-ounce package features a red plastic removable cap, finger control and is lithographed in two colors on white. "Glyco-mist" is also available in bottles with sprayers as well as in bulk for jobbers.



Lever Brothers Co., New York recently announced that it is marketing a new detergent, "Rinso Sunlight Detergent," to sell as a companion product with "Rinso" granulated soap. This in no way changes the status of regular "Rinso," which like the new "Rinso Detergent" contains solium. Marketing of the new detergent is already underway in the Kansas City area.

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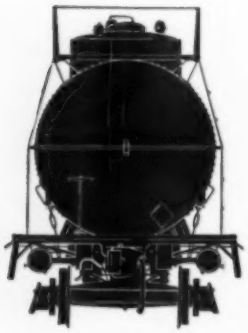

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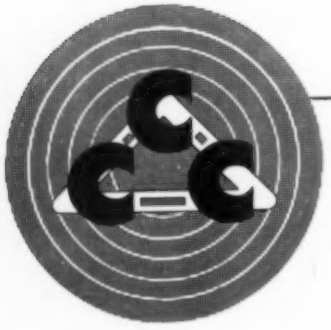

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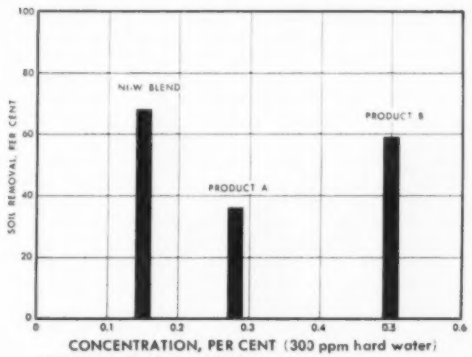
(FORMERLY NI 8586)

Oronite's new Dispersant NI-W is a clear, light straw-colored liquid—95% active. It may be compounded with phosphate or other builders and dried to give free-flowing granular products. It is also suitable for the making of liquid detergents. You will find NI-W very adaptable for the manufacture of economical, high-quality formulations. It is completely compatible with soaps and anionic detergents. As shown by the chart, unusual cotton detergency may be obtained. This new Oronite product is particularly suitable for manufacturing detergents for commercial or self-service laundries and automatic home washers. Technical bulletin describing Dispersant NI-W is available on request.



*19% NI-W, 1% Alkylaryl Sulfonate, 50% Sodium Tripolyphosphate, 30% Sodium Sulfate

Cotton detergency in a tumbling type automatic washing machine of a formulation based on Dispersant NI-W compared to products A and B (commercial materials designed for this use). Note that each product was tested at the recommended use concentration and that the NI-W compound shows high soil removal performance at low concentration.

Dispersant NI-O

(FORMERLY NI 8593)

This new clear, straw-colored liquid detergent is an excellent emulsifier for water-in-oil emulsions. Dispersant NI-O was specially designed for use as a dry cleaning detergent in systems employing all types of solvents. It has the ability to suspend large quantities of finely divided solids in solvent media. It exhibits superior detergency and is not readily absorbed by filter aids. Technical bulletin is available on request.

TESTS IN COMMERCIAL DRY CLEANING PLANT

	WOOLENS	
	DISPERSANT NI-O	Detergent A
Soil Removal Index*	99	91
Passup Rate**	70	55
	RAYONS	
	DISPERSANT NI-O	Detergent A
Soil Removal Index*	96	90
Passup Rate**	80	45

*Soil Removal Index determined by reflectance measurements of test swatches.

**Passup Rate is the percentage of garments not requiring spotting after cleaning.

ORONITE CHEMICAL COMPANY

THE NAME TO WATCH IN CHEMICALS

2565

A partial list of Oronite products:

Detergent Alkane, Detergent Slurry, Detergent D-40, Detergent D-60, Wetting Agents, Lubricating Oil Additives, Cresylic Acids, Gas Odorants, Sodium Sulfonates, Purified Sulfonate, Naphthenic Acids, Phthalic Anhydride, Ortho-Xylene, Para-Xylene, Xylol, Aliphatic Acid, Hydroformer Catalyst, Polybutenes.

ORONITE CHEMICAL COMPANY

38 SANSOME STREET, SAN FRANCISCO 4, CALIF. — STANDARD OIL BLDG., LOS ANGELES 15, CALIF.
30 ROCKELELLER PLAZA, NEW YORK 20, N.Y. — 600 S. MICHIGAN AVENUE, CHICAGO 5, ILL.
MERCANTILE SECURITIES BLDG., DALLAS 1, TEXAS

Soap Scents

by D & O

A perfumed bath is one of the oldest luxuries of mankind, and between the public baths of Rome and the colorfully-tiled private bathrooms of today, many a long century has elapsed.

As unchanged as water itself, however, is the human desire for a fragrant toilette, and to this end D&O has recently developed a number of fine new perfume bases specifically for soaps. Trial quantities and suggested proportions will be forwarded on request, however, individual experiment is recommended for best results.

Bouquet 40-R-6010—A new fresh type which has proved its value in direct consumer test competition with many perfumes. Particularly valuable in soap bases such as castile types which present a problem in covering base notes. **$6.35** per pound.

Verdura 14—Excellent body for compositions for which geranium is used in reduced proportions, or omitted. **$5.35** per pound

Vernafolia—Arbor and woodland scents unite to produce a charming aroma ideally suited for specialty toilet soaps. **$16.00** per pound

DeLuxe 40-R-6075—Entirely floral. Lily, rose and lilac skillfully blended produce this charming novelty. **$6.50** per pound

D&O

REG. U. S. PAT. OFF.

DODGE & OLCOTT, INC.

180 Varick Street • New York 14, N. Y.

SALES OFFICES IN PRINCIPAL CITIES

ESSENTIAL OILS • AROMATIC CHEMICALS • PERFUME BASES • VANILLA • FLAVOR BASES

for soaps and soap building

for soapless detergents

in cleaning compounds

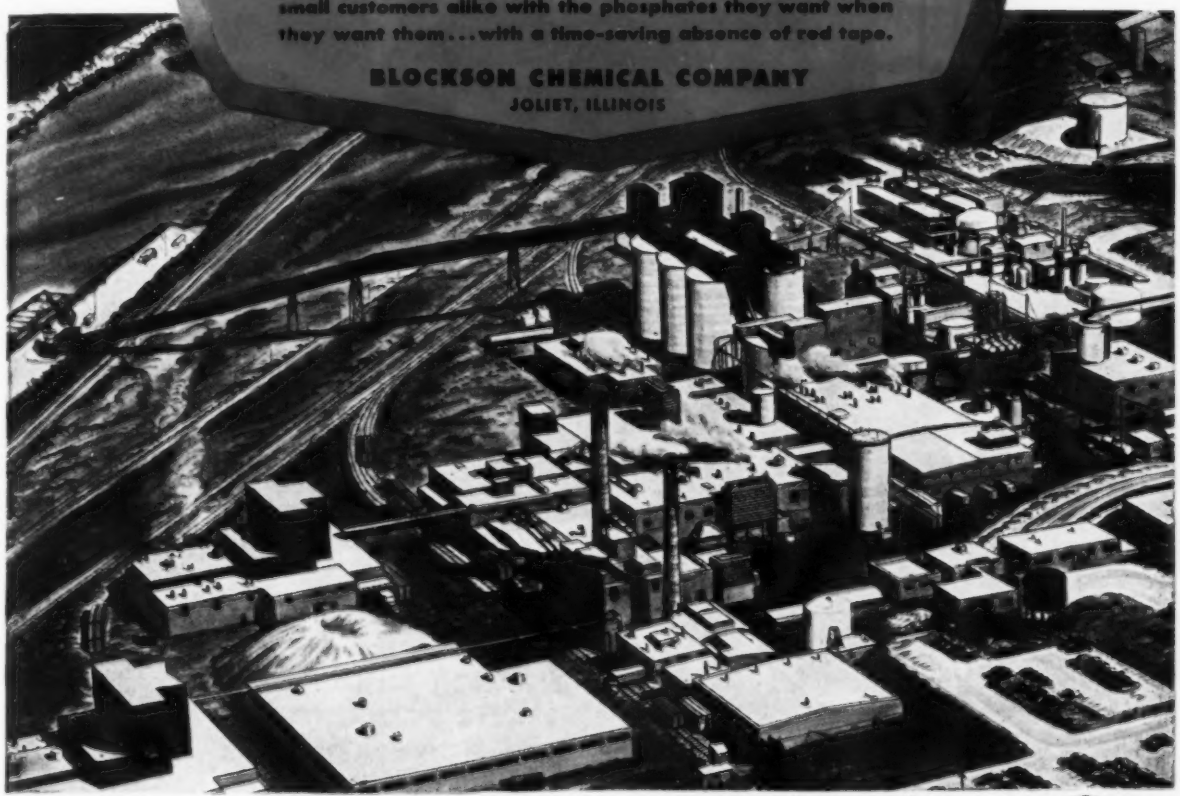
in dishwashing compounds

for water softening

BLOCKSON
Sodium Phosphates

Blockson is the major Sodium Phosphate producer that retains intimate small company flexibility by providing large and small customers alike with the phosphates they want when they want them... with a time-saving absence of red tape.

BLOCKSON CHEMICAL COMPANY
JOLIET, ILLINOIS



Blockson Plant . . . Joliet, Ill.

- Sodium Tripolyphosphate
- Tetrasodium Pyrophosphate, Anhydrous
- Sodium Polyphos (Sodium Hexametaphosphate) (Sodium Tetraphosphate)
- Trisodium Phosphate, Crystalline
- Chlorinated Trisodium Phosphate
- Trisodium Phosphate, Monohydrate
- Disodium Phosphate, Anhydrous
- Disodium Phosphate, Crystalline
- Monosodium Phosphate, Anhydrous
- Monosodium Phosphate, Monohydrate
- Sodium Acid Pyrophosphate
- Sodium Silicofluoride
- Sodium Fluoride
- Hygrade Fertilizer

BLOCKSON

Look for This Mark . . . . . It's the *Secret of Success*

Horizontal and Vertical sprays or droppers for lotion or powder

● The beauty and engineered quality of the IMCO Plastic Bottle has eye appeal and touch appeal, but most important, sales appeal. These are the factors that have helped form IMCO's pattern of success for many progressive manufacturers whom we serve.

Because we manufacture in our own plant all the parts for our plastic bottles and print your design on them, they come to you complete and ready to fill with either powder or liquid. Bottles come in a variety of attractive colors and are available in ½, 1, 2, 4, 6, 8, and 12 ounce sizes with colored caps, with leak-proof atomizer or spout and closures.

Send for a sample and study the fine engineered quality of IMCO squeeze-type plastc bottles. Visualize the sales possibilities for your product and join Injection Molding Company's pattern of success.

WHEN YOU SEE THIS MARK—

You're Looking at Quality

IMCO CONTAINER CORP.

Sales Agent for

INJECTION MOLDING CO.
FLEXCEL CONTAINER CO.
EXCELSIOR PLASTICS CO.

75th and Cleveland Streets, Kansas City 30, Mo.
NEW YORK OFFICE: 10 East 39th St., New York 16, N. Y.
Telephone: ORegon 9-2677

News

Mt. Hood Elects Officers

Henry Feldman has been elected president and Gus Feldman named vice-president of Mt. Hood Soap Co., Portland, Ore., it was learned recently. The new president succeeds his older brother, Joseph Feldman, who died earlier this year. The brothers are the sons of Philip Feldman, who founded the firm in 1902.

Lever Names Basford

Lever Brothers Co., New York, recently announced the appointment of G. M. Basford Co., New York, to handle advertising for its new industrial sales division. The division handles the sales of industrial soaps and detergents, glycerine, hotel soaps and bulk shortening. William Cochrane is in charge of the industrial division.

At the same time, Lever announced that the advertising firm of Batten, Barton, Durstine & Osborn, Inc., New York was given the "Surf" heavy duty household synthetic detergent account.

New Detergent Sanitizer

Essential Chemicals Co., Milwaukee, recently began manufacture of "Trust", which combines a disinfectant ingredient with a detergent. According to James A. Wheeler, president of the company, the new product is nonstaining, nontoxic and of a pleasant odor. The product consists of sodium dodecyl benzene sulfonate, as the detergent, with the disinfectant effect provided by dimethyl and chlorophenol. The latter two chemicals are made by the Ottawa Chemical Co., Toledo, and provide the disinfectant action.

Solem in New Conoco Post

H. P. Solem has been appointed to the newly created position of general manager of petrochemical sales, Continental Oil Co., Ponca City, Okla., it was announced recently by Harold G. Osborn, vice-president. Mr. Solem, who was formerly east coast divisional marketing manager, continues to make his headquarters in New York where he directs sales of Conoco petrochemical products made at company plants at Baltimore, Chicago and Trainer, Pa.

H. P. SOLEM

It was announced at the same time that V. F. Kavanagh of the company's New York petrochemical staff is now the eastern petrochemical sales representative, with headquarters in New York, and Sherman Harris has been named midwestern petrochemical sales representative, with headquarters in Chicago.

Bon Ami Annual Report

Bon Ami Co., New York and subsidiaries recently reported earnings for the year 1952 as follows: earned per class A share $1.91. This is in contrast with $2.52 in 1951, and $3.51 in 1950. Profit before income taxes $307,675 in 1952; $418,028 in 1951; and $491,355 in 1950. Income taxes were $126,550 in 1952; $179,020 in 1951; and $159,500 in 1950. Net profits were $181,125 in 1952; $238,828 in 1951; and $331,855 in 1950. Class A dividends were $189,166 in 1952; $189,166 in 1951; and $378,332 in 1950. Only in 1950 was there a report of Class B dividends which amounted to $100,000. Deficit for 1952 was $8,041, while in 1951 it was $49,662, and in 1950 $146,477.

Expands Detergent Plant

National Aniline Division of Allied Chemical & Dye Corp., New York, recently announced that it is expanding its facilities in Buffalo, N. Y. by the addition of a new $1,200,000 plant for the production of detergents.

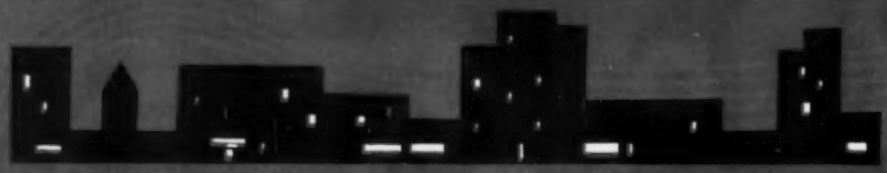
Trust Suit Postponement

A postponement to March 5 for filing an answer to the complaint of the Department of Justice in the civil suit at Newark, N. J. naming three soap makers and the Soap Assn. was granted recently. The civil suit, filed in December, 1952, followed by about two weeks a Federal Grand Jury's failure to return indictments in a criminal suit charging three soap companies, the Soap Association and A. C. Neilsen Co., Chicago, with violation of the anti-trust laws. The civil suit named Procter & Gamble Co., Cincinnati; Colgate-Palmolive-Peet Co., Jersey City, N. J.; Lever Brothers Co., New York, and the Association of American Soap & Glycerine Producers, Inc., New York.

A special committee has been authorized by the board of directors of the Soap Association to act for the board between board meetings whenever necessary in reference to the Government suit against the Soap Association. The Committee is composed of George A. Wrisley, Jr., of Allen B. Wrisley Co., Chicago, and AASGP president; Charles S. Campbell of J. B. Williams Co., Glastonbury, Conn. and Edward W. Wilson of Armour & Co., Chicago, AASGP vice-president for the midwest.

Taylor C-P-P Advtg. Head

Colgate - Palmolive - Peet Co., Jersey City, N. J., recently named Rolland W. Taylor vice-president in charge of advertising. Mr. Taylor formerly was a vice-president and director of Foote, Cone & Belding, New York, and was previously a vice-president of William Esty Co.



D.Y QUALITY SINCE 1844

Hotels . . . Restaurants . . . Stores . . . Apartments . . . Schools . . . Office Buildings . . . Hospitals . . . Theatres . . . Institutions . . . Churches . . . and all commercial, residential and industrial buildings

They are All Your PROSPECTS for Buckeye "SYND"

the concentrated, neutral synthetic detergent cleaning compound

tap this ACTIVE market...

You'll get a BIG Volume of Business and Steady, profitable Repeat Sales!

Buckeye "SYND"...

works wonders on *ALL* floors, walls, woodwork
. . . develops a clean, fresh odor

Buckeye "SYND" is the latest development from the DAVIES-YOUNG laboratories. It's a powerful liquid detergent that cleans quickly, thoroughly, safely and economically . . . actually dissolves dirt and soil. A trial will AMAZE your customers . . . you'll do them a big favor when you demonstrate and sell "SYND" for all cleaning jobs!

Get all the facts NOW!

Learn all about "SYND"—see how easy it is to sell—and then watch how fast and *regularly* the steady repeat orders come rolling in. "SYND" is a natural profit-maker because it so *completely* fills every cleaning need.

send the coupon in at once—
try "SYND"—prove it for yourself!

D.Y QUALITY SINCE 1844

The DAVIES-YOUNG Soap Co.
Dayton 1, Ohio

Clip Coupon . . . Mail at Once

FREE OFFER

THE DAVIES-YOUNG SOAP COMPANY
BOX 995, DAYTON 1, OHIO

Yes! We are interested in the sales and profit-possibilities of "SYND." Rush samples and literature today.

SSC 3-53

Firm Name _____

Address _____

City _____ Zone ____ State _____

Rieber Man Visits U. S.

E. Hall Christensen, a chemical engineer connected with A. s P. G. Rieber & Son, Bergen, Norway, visited the United States last month to contact basic producers of synthetic detergents. Rieber & Son produce a liquid detergent, the first of its kind in Norway. The firm, which was founded in 1839, also sells foodstuffs, building materials and fertilizers. Mr. Christensen reported that there was no heavy duty synthetic detergent in Norway at the present time. He stated that Lever Brothers market both soaps and synthetic detergents in Norway. While in the United States Mr. Christensen visited Atlantic Refining Co., Philadelphia; the Soap Association and the offices of *Soap and Sanitary Chemicals.*

Brown to P & G Board

Procter and Gamble Co. of Canada, Toronto, recently announced the appointment of William W. Brown as director of sales and a member of the board of directors. Mr. Brown formerly served as director of sales in the Philippines where Procter and Gamble operates the Philippine Manufacturing Co. His background also includes 14 years in the U. S. sales department of the company.

Fisher Rejoins Hardesty

W. W. Fisher, widely known in the fatty acids industry, recently rejoined W. C. Hardesty Co., New York, with which firm he was formerly associated from 1937 to 1951. Mr. Fisher is handling sales in the midwestern area, with his headquarters in the concern's New York office.

Durrer Heads Givaudan

Election of E. R. Durrer as president of Givaudan Corp., New York, and its affiliate companies, Givaudan-Delawanna, Inc., Givaudan Flavors Inc., Sindar Corp., and Givaudan-Foreign, Inc. at the annual meeting of the board was announced recently. Mr. Durrer succeeds Dr. Eric C. Kunz, who had retired from the active management of the company in 1947 when Mr. Durrer assumed the executive management in his capacity as executive vice-president.

The other officers elected by the board are: Xavier Givaudan,

ERNEST DURRER

chairman; F. N. Bangs, vice-president and secretary; H. F. Duffy, treasurer; Dr. Max Luthy, vice-president in charge of production and research; and R. E. Horsey, vice-president in charge of sales. R. E. Vicklund continues as manager of sales and development of Sindar Corp.

Balkema Packaging Talk

E. H. Balkema of Colgate-Palmolive-Peet Co., Jersey City, N. J., will speak at a luncheon meeting on April 20, during the National Packaging Exposition at the Furniture Club in Chicago, according to a recent announcement by Robert de S. Couch, of General Foods Corp., president of Packaging Institute. Mr. Balkema will talk on the organization of the newly created package printing division.

Waterless Hand Cleaner

A new waterless hand cleaner, "Steno-Creme", designed for office workers, was announced recently by Kelly Products Co., Compton, Calif. The new greaseless hand cleaner contains lanolin. It is designed to remove ink (including mimeo inks containing isopropenyl), carbon and ribbon smudge, glue, lipstick, nicotine from fingers, and general office dirt. Fingers cleaned with "Steno-Creme" will not leave a greasy residue on objects with which they come in contact immediately after its use.

Fatty Acid Production Up

Fatty acid production in December 1952 was at a level of 33 million pounds, according to figures recently released by the Fatty Acid Division of Association of American Soap and Glycerine Producers, New York. This reflects a slight rise above the November level and some three million pounds above the output in December 1951. The increase over 1951 was primarily in the production of saturated fatty acids. Also, disposition of fatty acids in December 1952 (35.2 million pounds) was higher than in November 1952 when the figure was 32.4 million pounds. However, there was a slight decrease in finished stocks from 38.2 million pounds on December 1, 1952 to 37.2 million pounds at the end of the month.

Total fatty acid production for 1952 was 365.3 million pounds, divided among the following individual products:

	Pounds
Saturated	
Stearic acid (40-50% stearic)	47,838,474
Other stearic acid, Hydrogenated animal and vegetable fatty acids...	65,453,003
High Palmitic	5,369,000
Hydrogenated Fish and Marine mammal	14,542,949
Lauric-type acids	31,517,681
Other saturated fatty acids..	10,459,376
Unsaturated	
Oleic acid	73,809,740
Animal fatty acid (other than oleic) I.V. 36-80.....	24,124,706
Vegetable or marine (I.V.-115)	43,481,359
Unsaturated-I.V. 116-130.....	21,970,930
Unsaturated-I.V. over 130....	24,797,408
Total	365,337,219

New Trio Catalog

A new catalog covering its line of disinfectants, waxes, polishes, soaps, and insecticides, recently was published by Trio Chemical Works, Inc., Brooklyn, N. Y. The 28-page catalog is fully illustrated and gives the specifications and uses of its many chemical specialty products. Though the catalog is intended as a reference manual rather than as an all inclusive list of Trio products, it covers fully in separate sections: pine oil disinfectants and deodorants, coal tar disinfectants and deodorants, "Tri-O-Soaps", glass and dishwashing compounds, polishes and cleaners, floor waxes, insecticides, and other chemical specialties. The catalog is available to consumers on request.

IN SOAPS...

...your repeat sales are made RIGHT HERE

...where GIVAUDAN odors build product appeal

Regardless of its excellent lathering and cleansing properties, no soap wins repeat sales unless it has a truly appealing odor.

Choose your soap perfumes wisely, with the help of GIVAUDAN... odor experts with many years of soap-scenting experience... developers of perfumes for many of the most highly successful soaps in the modern market.

We are at your service in any matters relating to odors for cleansing or sanitary products.

Givaudan-Delawanna Inc.

Leaders in Soap Perfumery
330 West 42nd Street, New York 36, N. Y.
Branches: Philadelphia • Boston • Cincinnati • Detroit
Chicago • Seattle • Los Angeles • Toronto

Soap Workers' Earnings Up

Gross earnings of production workers in the soap and glycerine industry were on the average $5 higher per week in October, 1952 than during the same period in 1951, according to statistics recently released by the U. S. Department of Labor. In October, 1952 an average weekly wage of $84.90 for 42.3 hours, or $2.007 per hour was paid to soap and glycerine workers. The year before they were paid $77.39 for 41.1 hours, or $1.883 per hour. In September, 1952 the worker reached a peak of $86.33 for 42.8 hours, or $2.017 per hour. The department's table shows workers avrage incomes rose from $71.81 for 41.7 hours, or $1.722 per hour for the year 1950 to a high $77.11 for 41.5 hours, or $1.858 per hour in 1951.

Farr Joins Emery Staff

Emery Industries, Inc., Cincinnati, recently appointed John D. Farr to its development and service department. In his new capacity, Mr. Farr is concerned with all development and technical service activities pertaining to Emery's Plastolein plasticizers. Mr. Farr, a chemical engineering graduate of the University of Illinois, has had considerable experience in vinyl plastics and synthetic rubbers with the B. F. Goodrich Co., at both their Akron and Marietta, O., plants.

Rinso Sunlight Detergent

Lever Brothers Co., New York, recently announced the marketing of a new "Rinso Sunlight Detergent", to sell as a companion product with regular "Rinso" granulated soap. Marketing of the new product is already underway in the Kansas City division. The company emphasized that this new product in no way changes the status of regular "Rinso". Both regular "Rinso" and new "Rinso Sunlight Detergent" contain "Solium".

Hooker Ups Walker

James S. Walker has been named manager of technical service of Hooker Electrochemical Co., Niagara Falls, New York, according to a recent announcement by R. E. Wilkin, general sales manager. Mr. Walker, a graduate in chemistry from Union College has been employed by Hooker since 1940. He served in various capacities as operator, chemist and process foreman. In 1947 he was promoted to the sales department as technical service representative and in 1950 he became technical service supervisor.

Kramer in New Territory

H. W. Kramer, sales representative of the phosphate division, Monsanto Chemical Co., St. Louis, recently was given responsibility for the territory in the western half of Missouri, including Wyandotte County, Kans. This new territory is in addition to the territory he presently serves in Eastern Missouri and parts of Illinois.

At the same time, responsibility for Monsanto phosphate division representation in the western half of Indiana was assigned to Wade T. Dougherty of the Cleveland district office. Mr. Kramer previously covered this Indiana territory.

SAACI Issues Tax Bulletin

The Salesmen's Association of the American Chemical Industry recently released a guide in filing federal tax returns to all its members. The information was reprinted through the courtesy of the National Council of Salesmen's Organizations as part of a regular series entitled "What Every Salesman Should Know About His Legal Rights". The bulletin consists of questions and answers, and a chart to provide some tax-saving suggestions and aids.

Executives of Fritzsche Brothers, Inc., headed by F. H. Leonhardt, president, officiate at opening of new Toronto administration offices and plant of New York essential oil firm's Canadian affiliate, Fritzsche Brothers of Canada, Ltd. (L. to R.): Ian MacInnes, sales representative; Fred H. Leonhardt, Jr., vice-president; Mr. Leonhardt; Joseph A. Huisking, vice-president; Harry J. Stesco, office manager; Leslie Joyner, secretary; and Lloyd W. Speck, vice-president

Glyco Celebrates 25 Years

Glyco Products Co., Brooklyn, producers of 100 synthetic organic derivatives, is now celebrating its 25th anniversary. The principal products made by Glyco are technical and edible surface active agents, synthetic waxes, insecticides and detergents. A new plant at Williamsport, Pa. covers about 30 acres with 150,000 sq. ft. of building space and has four railroad sidings.

Diamond Takes Option

Diamond Alkali Co., Cleveland, and Belle Alkali Co., Belle, W. Va., recently announced that Diamond has taken a 60-day option either to purchase the stock of the Belle company or acquire the right to use the Belle process for the chlorination of methane.

Gair Appoints Lynn

Alan Grayson Lynn recently was appointed manager of products development department for shipping containers and related products, Robert Gair Co., New York. Mr. Lynn, working in the container field for 24 years, joined the products development department in 1949.

Fragrance Found. Lunch

Mary Bailey, supervisor of consumer research for Richard Hudnut, New York, disclosed that 70 per cent of women questioned in a recent poll bought their own fragrance. She revealed this and other facts at a recent luncheon of The Fragrance Foundation at the Hotel Plaza, New York.

When your perfume creation

makes her a sensation,
chances are, Norda has helped

The fragrance of quality makes a perfume distinctive. Fine perfumes are always exciting. The perfumes that subtly flatter are the perfumes that women prefer.

Norda essences and fragrances are widely used for distinguished perfumes. Norda's years of experience, skill, and imagination in producing and compounding creations for quality perfumes, are depended on and widely trusted.

Let Norda help you produce perfumes of highest quality, great appeal. Norda's good scents are selling scents. Send for free Norda samples today.

Norda ESSENTIAL OIL & CHEMICAL COMPANY, INC.
601 West 26th Street, New York 1, N. Y.

CHICAGO • LOS ANGELES • SAN FRANCISCO • ST. PAUL • DALLAS • MONTREAL • TORONTO • HAVANA • LONDON • PARIS • GRASSE

Gulf Alkali Buys Plant

Property in Houston, Tex. formerly occupied by Chipman Chemical Co., Bound Brook, N. J., consisting of a chemical plant, warehouse space, office building and railroad siding located at 401 Yale Street, was purchased recently for immediate occupancy by Gulf Alkali Corp. of New York, according to Thomas D. Jenkins, president. At the same time, Mr. Jenkins revealed that the corporation had taken over Red Circle Products Co., makers of packaged chemical products. G. D. Thiel, formerly proprietor of the company, will be vice-president in charge of this operation, and Douglas McGregor is secretary and treasurer. In addition to expanding the Red Circle line, the new facilities will be available for contract packaging of nationally advertised brands for distribution and sale in the southwest. Export sales will be handled by the Inter-Gulf Chemical and Supply Corp. through their jointly occupied offices at 509 Madison Ave., New York.

Handles A. Hoffman Line

J. B. Henriques, Inc., 521 Fifth Ave., New York, is now handling the sales of the resale chemical division, Arnold Hoffman & Co., Providence, R. I. He was formerly employed by Arnold, Hoffman as vice-president in charge of plastics and resale chemicals, and has retained the same staff as the one which served with him prior to the opening of the new firm.

Tall Oil Anniversary

This month marks the tenth anniversary of the first shipment of tall oil, a by-product of sulphate pulping process, by Union Bag and Paper Corp., New York. Union markets this chemical raw material under the brand name, "Unitol". The soap industry, looking for a wartime substitute source of rosin, was the first to try tall oil. Since then, however, the low cost and ample supply of this product has prompted the development of many new markets. Industry production for 1951, the last full calendar year available for statistical purposes, totalled about 175,000 tons.

Brna Joins Roubechez Staff

Paul Brna recently joined the staff of Roubechez, Inc., New York,

P. BRNA

D. D. McKENZIE

perfuming materials firm, and will be the resident manager of the firm's new midwestern branch at 7481 Shamrock Lane, Cincinnati. Mr. Brna was formerly connected with Magnus, Mabee and Reynard, Inc., New York.

At the same time, it was announced that D. D. McKenzie recently joined the staff of R. M. Ferguson and Co., Toronto, representatives of Roubechez in Canada. Mr. McKenzie, having had varied experience in the aromatic field, will also serve in a sales capacity.

New Allied Laboratory

General Chemical Division of Allied Chemical & Dye Corp., New York, recently revealed plans to build a large research laboratory at Morristown, N. J. The new facility will replace the division's present research laboratory at Laurel Hill, N. Y. The new laboratory will be located on the outskirts of Morristown, adjacent to Allied Chemical's central research laboratory.

Plans for the new research center call for a modern, functional laboratory building of three-story brick construction. The new facility will have 50,000 square feet of floor space and will be equipped with the latest types of physical equipment, including an electron microscope and infra-red spectographs, library, etc. General chemical also maintains other research laboratories in Baton Rouge, La., and San Francisco, as well as facilities for development or pilot plant research near Philadelphia.

Monsanto Names Watt

James H. Watt was recently appointed branch manager of plastics sales for the Los Angeles office of the western division, Monsanto Chemical Co., St. Louis. Mr. Watt, who has been assistant branch manager in the Los Angeles office since 1947, succeeds W. F. Roberts who died January 23. He is responsible for the sale of all Monsanto plastic materials in southern California, including "Lustrex" styrene molding materials produced at the western division's plant at Long Beach, Calif. After joining Monsanto in 1932, Mr. Watt worked on a variety of projects in the plastic division research, development and testing groups. He joined the sales department in 1946.

Speaks on Odor Perception

Dr. Max Stoll, head of the research laboratories of Firmenich, Inc., Switzerland, spoke on the special problems in the field of odor perception, at a meeting of the Chicago chapter, Society of Cosmetic Chemists, on March 10 in Henrici's Restaurant. Dr. Stoll is an authority on the chemistry of essential oils and aromatic chemicals, and has had many papers published. He was awarded the Fritzche Award for 1952 for his outstanding work in this field.

UK Chemical Plant Show

The Chemical Plant Exhibition, the first to be staged in the United Kingdom since the war, will be held at Olympia, London, from September 3 to 17, 1953, it was announced recently by its sponsor the British Chemical Plant Manufacturers Association.

Woulfe Manz Head

Henry F. Woulfe, formerly president of the Pepsodent division of Lever Brothers, New York recently has been elected president of Manz Corp., Chicago, color printers and engravers. Mr. Woulfe joined Manz in 1950 as vice-president and subsequently was elevated to the post of executive vice-president.

DOUBLE CHECKED ✓ FROM RESEARCH TO INDUSTRY

ALL HELMETS . . .

BUT designed for different uses!

ALL NON-IONICS

BUT designed for different applications!

The Sharples Nonic line consists of unique non-ionic surface-active agents, each designed to do a definite job for you. The hydrophilic-hydrophobic balance of each Nonic is adjusted to provide optimum properties for your application.

NONIC 218 powerful detergent and wetting agent . . . maximum solubility in water and in salt solutions.

NONIC 234 powerful detergent with superior wetting properties.

NONIC 259 clouding agent.

NONIC 261 emulsifier for mineral, fish and vegetable oils.

Write Sharples for samples and technical information.

SHARPLES TRADE MARK CHEMICALS

SHARPLES CHEMICALS INC.

A SUBSIDIARY OF THE PENNSYLVANIA SALT MANUFACTURING COMPANY

100 Fifth Ave., New York • 80 E. Jackson Blvd., Chicago • 106 S. Main St., Akron
Martin, Hoyt & Milne Inc., San Francisco • Los Angeles • Seattle • Portland
Shawinigan Chemicals, Ltd., Montreal • Toronto
Airco Company International, New York

Dow Moves Aromatic Office

The aromatics sales office of Dow Chemical Co., formerly located at the company's aromatics laboratory in Jersey City, N. J., was moved recently to the Dow's New York City office at 30 Rockefeller Plaza. Edward A. Bush and William F. Meeks, aromatics salesmen who formerly made their headquarters at the laboratory, are now part of the New York office sales staff.

Westvaco Men in New Posts

Changes of sales personnel at the New York office of Westvaco Chemical division, Food Machinery and Chemical Corp. were announced recently. Arthur F. Smith was appointed staff assistant to J. C. Thom, manager of sales. Mr. Smith, formerly divisional sales manager in charge of alkalis, has been associated with Westvaco over the past 10 years, serving in various sales capacities, among them divisional sales manager for barium chemicals and solvents. James G. Bronson was named divisional sales manager in charge of alkalis.

SCC Employment Exchange

The Society of Cosmetic Chemists, New York, recently announced the establishment of an employment service to supply qualified chemists to the cosmetic industry. This service is available without charge either to the chemists or employers, and is administered by the society's corresponding secretary, Miss Cornelia van der Linde, who was formerly associated with Executive Job Counsellors, Inc. The service is also available to non-members.

CCDA Medal to Klipstein

Kenneth H. Klipstein, assistant general manager and head of the technical department of the Calco chemical division of American Cyanamid Co., Bound Brook, N. J. has recently been announced as the 1953 medalist for the annual award conferred by the Commercial Chemical Development Association for outstanding accomplishment in commercial chemical development. The award is to be made at a dinner honoring Mr. Klipstein following the annual open meeting of the association on March 23 at the Statler Hotel, New York.

Mr. Klipstein, who is 52, began his career with E. C. Klipstein & Sons in 1924 after receiving a master's degree in chemistry from Princeton in that year. His career with Calco began with the merger of Klipstein & Sons with Calco in 1933.

Photo taken during recent annual sales meeting in New York of Magnus, Mabee & Reynard, Inc., New York.

Frazier in New Plant

Frazier & Son, manufacturers of "Whiz-Packer" packaging machinery, recently moved from their former facilities at Belleville, N. J. to a new plant at 20 Industrial West, Allwood, Clifton, N. J. The new plant is a one-story, modern type structure which provides 300 per cent more space than the firm's previous plant.

Witco Ups Minnig

Max A. Minnig, vice-president and national sales manager for Witco Chemical Co., New York, was appointed recently director of sales for the company. Mr. Minnig joined the company in 1946 in the natural gas division, Carbon Black operations.

Appointed assistant to Mr. Minnig is William Wishnick who came to Witco in 1949 after graduating from the University of Texas. He began his career with Witco in the Chicago asphalt sales division.

Hooker Appoints Bryant

F. L. Bryant recently was appointed superintendent in charge of production, maintenance engineering, traffic and plant stores for the Niagara Falls plant of Hooker Electrochemical Co. J. D. Sweeney has been named as assistant superintendent of production. Prior to his recent appointment, Mr. Bryant was plant superintendent, and has been with Hooker since 1935 in various assignments. Mr. Sweeney, a newspaper man before being employed by Hooker in 1937, worked as an operator, chemist, assistant foreman, foreman and department head.

Cuts Butanediol Price

Price reductions of two products recently went into effect according to an announcement by Dr. Jesse Werner, director of commercial development, General Aniline & Film Corp., New York. The price of 35 per cent butanediol solution has been lowered to 20 cents a pound, or 57 cents a pound on a 100 per cent basis. The price of 1,4-butanediol has been lowered to 60 cents a pound. The two chemicals are used as chemical intermediates for essential oils, and other products. Butanediol is also a solvent and humectant.

Burglar Cleans Out Lever

Lever House, gleaming glass skyscraper headquarters of Lever Brothers, New York recently had $6000 worth of mink removed from its Park Avenue windows by a burglar who boasted he got them "without saving a single soap wrapper or penning a single jingle." The minks—a $4200 coat, a $1000 stole and a $700 scarf, were displayed in the window as prizes in a recently opened soap jingle contest.

Anthony A. Dillon, 27, of New York revealed to police that he stole the second and third prizes a week earlier without any detection, and had disposed of them for a fraction of their true value. However, the suave burglar returned a week later to

SOLD.....by a finer fragrance!

A search is constantly on . . . a search for that rare scent that sustains its full, fresh fragrance for the magic moment when product and purchaser meet over the counter. Verona research has developed a line of fine chemical specialties which have *proven* themselves decisively in the refinement of many perfumes. Try as little as a fraction of 1% of the products listed below in your present fragrance . . . *Note the "before and after" effect!*

- **VERONOL**.....A single chemical of great power used to achieve the aldehydic top note.
- **CYCLAMAL**.....The accepted raw material for producing that clean, floral fragrance in all types of products, from soaps to the most expensive perfumes.
- **CUMIN KETONE**..To impart the natural floral note to your compositions.
- **RESEDALIA**.....An acetal; as true a base for Reseda Mignonette types as is Phenyl Ethyl Alcohol for Rose. Combined with the Ionones, it produces very interesting and different effects.

Sole Representatives in the United States for J. AND E. SOZIO, Grasse, France
Resinoides • Natural Absolutes • Essential Oils

USE VERONA PRODUCTS TO BUILD SALES FOR *Your* PRODUCTS

AROMATICS DIVISION • VERONA CHEMICAL CO. 26 Verona Avenue, Newark, N. J. • 208 North Wells Street, Chicago, Ill.

collect the big prize, a $4200 mink coat, and was apprehended by Joseph Galvin, superintendent, who seized the thief and held him until police arrived.

Packaging Show Apr. 20-23

The American Management Association's 22nd National Packaging Exposition will be held in Chicago, April 20-23. The four-day show, together with its companion event, A.M.A.'s National Packaging Conference, will be the principal features of Packaging Week. The exposition will occupy both wings of Chicago's Navy Pier to house an anticipated record 350 exhibitors of machinery, equipment, materials and services.

Fred Firmenich Dies

Fred Firmenich, former head of Firmenich et Cie., Geneva, Switzerland, recently died at his home in Geneva at the age of 79. In 1900, Mr. Firmenich joined the firm of Chuit Naef et Cie., owned by his brother-in-law. He traveled extensively throughout Europe as well as in the United States, where he first came in 1909, making known to the perfumery trade such specialties of his house as Dianthine, Cyclosia, and Iralia.

In 1910, Chuit, Naef et Cie. became S. A. Naef Cie., and Mr. Firmenich became a partner of it. Following the retirement of Messrs. Chuit and Naef, Mr. Firmenich gave his name to the firm which then became, and still is, Firmenich et Cie., with himself as senior partner, and his brother Hugo and his two sons, Andre and Roger Firmenich, as associates.

Japan Halts Tallow Imports

Japan recently announced the temporary suspension of beef-tallow and soy bean imports from dollar areas. The government said import goals had been topped for fiscal 1952, ending March 31. Beef-tallow imports exceeded the 48,000-ton goal by 20,000 tons, and soy bean imports exceeded the 285,000-ton goal by 45,000 tons.

D & O Elects Officers

John L. Cassullo was elected president and R. V. Behrens was elected treasurer at a recent special meeting of the directors of Dodge & Olcott, Inc., New York. The meeting was called to fill the posts vacated by the death of Joseph F. Rudolph, president, and F. H. Kirn, who resigned. Others appointed at that time were Fred H. Leonhardt, Jr., secretary and vice-president in charge of production and research; and L. Young, assigned the newly created post of assistant treasurer.

JOHN L. CASSULO

Ardis to Dallas for C-P-P

B. V. Ardis has recently moved to Dallas to assume new duties as district sales supervisor for Colgate-Palmolive-Peet Co., Jersey City, N. J. Mr. Ardis, who joined Colgate at Long Beach, Calif., as a salesman in 1945, is a native of New York City.

Soap Sales Off in 1952

Dollar sales of soap for 1952 were 18.5 per cent, under those of 1951, whereas detergent sales rose 16.8 per cent over the previous year, according to figures recently released by the Association of American Soap and Glycerine Producers. Combined sales of soaps and synthetic detergents were up 2½ per cent over 1951. Sales of solid soaps in 1952 were 1.82 billion compared with 2.02 billion in 1951. Liquid soaps sales in 1952 amounted to 5,735,000 gallons, compared with 4,996,000 gallons in 1951—a rise of 8.9 per cent. Sales of soap, solid and liquid, for the year 1952 amounted to 1.87 billion pounds, compared with sales in 1951 of 2.06 billion pounds—a decrease of 9.1 per cent.

Total soap sales reported by AASGP members in 1952 are:

	Pounds	Dollars
Soaps other than liquid	1,824,224,000	346,928,000
Liquid soaps	5,735,000 Gal.	7,703,000
Total sales value		354,631,000
Bar toilet soaps	463,266,000	124,651,000
White laundry bars	200,874,000	33,821,000
Yellow laundry bars	122,465,000	9,916,000
Soap chips and flakes, pkgd.	80,882,000	21,031,000
Soap chips and flakes, bulk	128,180,000	12,290,000
Granulated, pwd. and sprayed	719,294,000	122,121,000
Washing powders packaged	13,855,000	1,091,000
Miscellaneous or "other" soaps	4,323,000	943,000
Shaving soaps	6,141,000	3,961,000
Shaving cream	8,174,000	9,030,000
Paste and jelly soaps	26,826,000	3,299,000
Washing powder bulk	27,701,000	1,891,000
Hand pastes	22,243,000	2,883,000
Liquid soaps—other than packaged shampoos	5,379,000	5,804,000
Shampoo	356,000	1,899,000

Total synthetic sales of 1.63 billion pounds reported for 1952 were 21.9 per cent above 1951 sales of 1.26 billion pounds. This represented a total sales of $336,663,000 for 1952, as compared with 1951 sales of $288,336,000. Sales of non-liquid synthetic detergents for 1952 were 1.48 billion pounds compared with 1.22 billion pounds in 1951, an increase of 21.7 per cent. Total non-liquid sales in 1952 were $314,298,000, as against $269,683,000 in 1951. Liquid synthetic detergents reported sold in 1952 totaled 49.6 million pounds, as compared with 38.2 million pounds in 1951, an increase of 29.7 per cent. Total dollar sales of liquid synthetic detergents in 1952 were $22,365,000, as against sales of $18,653,000.

Probes Chlorophyll Claims

The Federal Trade Commission is currently investigating the claims being made by manufacturers of chlorophyll products. The FTC has begun conferences with manufacturers to devise regulations governing competitive standards for products containing chlorophyll.

We help shampoo America's loveliest heads

Beauty often begins in a test tube. For example, Drew Research Laboratories has created ingredients now used in several of America's biggest selling shampoos—both soap and synthetic types.

DREW CONDENSATE 1011

A synthetic surface active agent with properties which make it excellent for use in cream lotion shampoos, bubble bath preparations and cosmetic creams. Instantly soluble in hot or cold water. Super abundant foaming, effective wetting action. Foams, penetrates and cleans, even in hard water.

DREW SHAMPOO BASE M

Soapless synthetic detergent that produces rich, billowy suds in one application. Quick rinsing, it leaves hair absolutely free of suspended oil and dirt. Contains an additive to condition the hair and eliminate "unruliness."

DREW BASE S E B

High quality neutral potash soap of coconut oil with instant, profuse foaming action. Clear, brilliant, this aqueous solution presents an exceedingly attractive product with customer appeal. Excellent penetrating and cleansing action.

For quality in your products—look to Drew for the finest chemical ingredients.

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CHICAGO PHILADELPHIA BOSTON

DREW PRODUCTS

Detergents . . .

(*From Page 55*)

cleaned. But this is not the whole story. The ingredients must be so selected as to get along happily with each other under conditions of storage. If we put together the wrong mixture, one ingredient may withdraw water from another or otherwise react chemically with it causing the mixture to turn to a mush or harden to the consistency of concrete.

As we all know, the synthetic detergents and other synthetic surface-active agents were developed about twenty-five years ago to meet the needs of the textile industry. And for some time they were scarcely heard of outside of this industry. Little by little, however, their use spread into other fields notably into that of metal cleaning. The synthetics have been a boon to the producer of industrial cleaners because of their many advantages. They wet soils rapidly and efficiently, disperse and suspend dirt particles, emulsify oil and grease, and do a number of other things that improve detergency. They do not attack delicate surfaces and have the added advantage that they are little affected by hard water salts and accordingly do as good a job in hard water as in soft.

It would be almost impossible to compound a cleaner capable of meeting the exacting demands of present day production cleaning without using one or more synthetic detergents. It is well known that a combination of several synthetics often does a better job than can be done by any one alone. We call this a "synergistic" effect, but this is just a ten-dollar word to cover up the fact that we really don't understand what's happening.

The selection of the right synthetic or combination of synthetics to do any particular job and at the same time be compatible with the other ingredients of the cleaning mixture is no easy task. McCutcheon (1) in his most recent compilation lists about a thousand commercially available synthetic detergents. Many of these are completely different chemically and consequently behave differently. Some are predominantly detergents, others predominantly wetting agents, penetrants or emulsifiers. Strictly speaking we should use the term surface active agents instead of synthetic detergents to define these products. However, this does not make the selection of the right one any easier. The proper choice of compounds can only be accomplished by painstaking work in the laboratory.

Solvent Cleaners

UP to this point we have only discussed what are known as "alkaline cleansers". But it is worth calling attention to the fact that another class of industrial cleaning materials, the solvent cleaners, has been growing rapidly during recent years. Products of this class consist of mixtures of emulsifiers and other surface active agents dissolved in a petroleum solvent. When used, they are diluted with five to ten parts of water to form a more or less permanent emulsion or they may be diluted with additional solvent. The solvent cleaners are suitable for application either in tanks or in pressure spray washing machines. Since they contain good emulsifying agents they are readily rinsed off with water leaving a light film of oil that affords some rust protection.

Unfortunately there are no reliable figures on the production of industrial cleaning materials available. At least, I have not been able to find any. Various estimates have been given for the quantity of synthetic detergents used for industrial purposes. They range from 200 million to about 400 million pounds per year, depending upon what concentration of active ingredient is taken as the basis for the calculations. Let us accept the higher figure and assume an active ingredient concentration of about 35%.

There is good reason to believe that about half of the synthetic detergents used for industrial purposes is consumed by the textile industry. This leaves us with a figure of 200 million pounds going into industrial cleaners. If we now make the further assumption that the synthetic detergent represents on the average only 10% of the cleaning mixture, we arrive at a figure of two billion pounds of industrial cleaners produced per year. There are several assumptions in this calculation which may not be justified, and the final figure may be 100% out of the way. My own guess is that the total production of industrial cleaning materials amount to somewhere in the neighborhood of one billion pounds a year.

(1) John W. McCutcheon, Synthetic Detergents up to date II, *Soap & Sanitary Chemicals* Nos. 7-10, XXVIII 1952.

New Roure-Dupont Catalog

A new catalog on essential oils, aromatic products and perfume bases has recently been published by Roure-Dupont, Inc., New York, associates of Roure-Bertrand Fils & Justin Dupont of Paris. The catalog gives, in descriptive detail, the entire variations of "Basodors" and specialties now available to the American market. Prices are given for all items.

SOCMA Hears Campbell

Harry A. Campbell, chief inspector of the bureau of explosives of the Association of American Railroads, spoke at the Feb. 11 luncheon meeting of the Synthetic Organic Chemical Manufacturers Association of the U. S., held in the Commodore Hotel, New York. Mr. Campbell told the members that in the shipment of flammable liquids, flammable solids, poisons, and other chemical compounds, the occasions are rare and infrequent when it is necessary to recommend that a penalty be invoked on a shipper for willful violation of the I.C.C. regulations.

New research and engineering staff building, which the National Aniline Division of Allied Chemical & Dye Corp., New York, plans to erect at Buffalo, N. Y. The three-story brick and steel building will provide 85,000 square feet of floor space for offices and laboratories, library, machine shop, glass working shop, and other facilities.

No matter how you look at it
Nacconol is your best all-around money value
in all-purpose detergent materials. Here's why

1. Nacconol is the time-tried, balanced formulation with just the right combination of detergency, wetting, emulsifying, dispersing and foaming. More Nacconol has been used for more years for more purposes than any other mass-produced detergent!

2. Nacconol comes in flake, powder, granular and the popular new Dense Bead form. Liquid formulations also. In all, eleven different forms.

3. Nacconol is always available. You won't find a more dependable source of supply for your detergent materials.

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Providence 3, R.I., 15 Westminster St.	DExter 1-3008	Columbus, Ga., Columbus Interstate Bldg.	Columbus 3-1029
Philadelphia 6, Pa., 200-204 S. Front St.	LOmbard 3-6382	Greensboro, N.C., Jefferson Standard Bldg.	GReensboro 3-2518
San Francisco 5, Cal., 517 Howard St.	SUtter 1-7507	Chattanooga 2, Tenn., James Building	Chattanooga 6-6347
Portland 9, Ore., 730 West Burnside St.	Beacon 1853	Atlanta 2, Ga., 254 E. Paces Ferry Rd.	EXchange 2594
Chicago 54, Ill., The Merchandise Mart	SUperior 7-3387	New Orleans 12, La., 714 Carondelet Bldg.	Raymond 7228
Charlotte 1, N.C., 201-203 West First St.	CHarlotte 3-9221	Toronto 2, Canada, 137-143 Wellington St. W.	Empire 4-6495

Allied Chemical

Wildroot Shampoo

(*From Page 45*)

warehousing facilities. The first home of the company was a modest two-floor area in the Sidway Building in Buffalo.

As new products were added to the Wildroot line and as consumer demands increased, the need for larger quarters became more and more pressing. In the early Twenties the company moved to more spacious quarters in a remodeled planing mill at 1490 Jefferson Avenue. At that time the accommodations seemed adequate for many years to come.

By the Forties Wildroot was again "busting out at the seams." The Jefferson Avenue plant simply was not large enough to handle the growth of the various departments of the company, and so the present site of the plant was acquired. This was a tract approximately two city blocks in size. The company's production facilities were moved into the new factory building in 1945, and executive and general office personnel occupied the new Administration Building in November, 1947.

In spite of the recently completed building program Wildroot by 1950 was again feeling the pinch for space. The problem was solved by the purchase of a former hosiery manufacturing plant directly opposite the factory building on Fay Street. The building was ideally suited, both by location and construction, to fit into the Wildroot operation. In 1952 an additional 42,000 feet warehouse was added to the new factory building.

The plant is in the form of a "T", with the Administration Building as the vertical line facing Bailey Avenue. The office building is of reinforced concrete, brick and glass block design, built along the most modern and efficient architectural lines. The first floor houses the mailing and printing departments as well as a large and cheerful cafeteria for employees. Advertising, sales, purchasing, accounts payable and general offices are on the second floor, with the accounting, billing, credit and filing offices on the third floor.

The three-story factory building houses the manufacturing department on the third floor, the production or packaging department on the second floor, and the shipping, stock, receiving, boiler rooms and garage on the first floor, the latest plant addition across Fay Street is also a part of stock and shipping.

In the third floor manufacturing department the great number of ingredients which enter into Wildroot products are processed under various formulas developed by the company and are then stored in large steel tanks until used by production. Many of the ingredients come from far corners of the earth. Many of them are very expensive. A single drum of perfume, for example, represents an investment of approximately $3,000. Due to the volatile nature of many of the elements used in the manufacture of the various products, it was necessary to install vapor and explosion-proof electrical systems to minimize the possibility of fire.

Also on the third floor is the laboratory which includes an office, library and the laboratory proper. Dr. Emanual G. Gundlach is director of technical research. The three principal functions of the laboratory are: (1) To serve as a quality control laboratory for the supervision and maintenance of product quality in plant operation; (2) development of new products; and (3) improvement of existing formulas.

The production department is composed of nine production lines, eight of which are easily changeable to any one of the various Wildroot products or bottle sizes. The ninth line is a tube filling machine. All liquids are gravity fed to the production lines from the third floor storage tanks, with the single exception of the tube machine line which must use thermo units and a power pump to liquefy and force the Cream-Oil to the tube machine.

Average speed of each filling line is 120 bottles per minute or a total of 55,000 bottles for an eight-hour shift. The various lines use on an average 300,000 bottles per day.

All Wildroot products in the stock rooms are palletized for labor saving and for better utilization of space. Stock is removed from storage and placed on either side of a master conveyor belt in designed bays. Handlers, informed through a public address system by the shipping clerk, place on the conveyor belt the products which make up a certain order. The goods are checked, stenciled with destination and identification and carried directly into the waiting freight car or truck. These conveyor lines may be reversed to unload materials intended for factory use either from freight cars or trucks.

Scope of Organization

THE Buffalo plant services the needs of the United States and also ships products for export. A Canadian company, known as Wildroot, Ltd., of Fort Erie, manufactures, packs and ships to meet the requirements of the Dominion of Canada. To speed the flow of goods to Wildroot's West Coast customers warehouses are maintained at San Francisco, Los Angeles and Portland, Ore.

Manufacturing agencies have been set up in Mexico and Cuba, and these countries have been familiar with Wildroot products for several years. The export activities extend into many parts of the world. A partial list of the countries to which Wildroot products are shipped includes Venezuela, the Philippines, Puerto Rico, Panama, Dominican Republic, India, Costa Rica, Nicaragua, and Bermuda.

Head of Wildroot's far-flung activities is president H. J. Lehman who has been a member of the Wildroot organization for nearly 40 years. Next in line is Robert E. Schwartz, executive vice-president, also with years of experience in the business.

Other top Wildroot executives include J. Ward Maurer, director of advertising; Albert E. Ritchie, general sales manager; Edward J. Pempsell, comptroller and assistant treasurer; Orlo D. Wheaton, plant manager; George Wilson, superintendent of production; and Nathan Weiss, assistant superintendent of production.

DRYMET*

THE ECONOMICAL DETERGENT SILICATE

Cowles DRYMET, anhydrous sodium metasilicate, is the most highly concentrated form of sodium metasilicate available. One pound of DRYMET is equivalent to 1.6 lbs. of sodium metasilicate pentahydrate. DRYMET contains no water of crystallization. It is more economical to use, on the basis of both Na_2O (alkalinity) and SiO_2 (silicate), than any other type of hydrated or anhydrous detergent silicate, either compounded or by itself.

*Reg. U. S. Pat. Off.

DRYMET IS USED IN COMPOUNDING SUCH PRODUCTS AS:

1. Floor Cleaners
2. Laundry Products
3. Metal Cleaners
4. Dairy Cleaners
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6. General Purpose Cleaners
7. Soap Builders
8. Paint Cleaners
9. Paper De-Inking Compounds
10. Household Cleaners

DRYMET HAS THE FOLLOWING ADVANTAGES:

1. Reinforces "wetting-out" action
2. Lowers surface tension of water
3. Resists rapid exhaustion of cleaning solution
4. Improves and stabilizes emulsifying and deflocculating power of solution
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Now—you can supply the rapidly expanding automatic home laundry market with an effective safe powder bleach! When properly formulated with Du Pont sodium perborate, these odorless bleaches can be used on all washable fabrics—natural, synthetic, white, colored or printed—without harming color or fabric. *No other type bleach offers such versatility!*

Let Du Pont help you develop suitable, inexpensive formulations. We have the experience and technical facilities that can be useful to you in adding this profitable item to your line. And we will be glad to show you the results of surveys which indicate why people want—and buy—safe powder bleaches; give you helpful facts about this fast-growing market. Don't delay—get all the details. Just fill out and send in the coupon below.

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PIONEER
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Birch, Sweet, U.S.P.
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Limes Distilled
Limes Expressed
Limes 5-Fold
Limes Terpeneless
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Bids and AWARDS

Marine Corps Soap Award

A recent opening for miscellaneous supplies by the Marine Corps, Arlington, Va., included 726,700 pounds of laundry soap. Armour & Co., Chicago, won the award on item 1b with a bid of 4.21 cents and Gillam Soap Works, Fort Worth on item 2b with a bid of 7.9 cents.

P.O. Polish Bids

Trio Chemical Works, Brooklyn, submitted the lowest bid of 50 cents on 4,000 gallons of furniture polish in a recent opening for miscellaneous supplies by Post Office Department, Washington, D. C. In another opening by the same agency for 3,000 gallons of metal polish, Trio was low bidder with 47 cents.

QM Detergent Bid

A recent opening for miscellaneous supplies by Quartermaster Purchasing Office, New York, included type I, hard water dishwashing compound, item a, export pack, 295,000 pounds; b, domestic pack, 198,000 pounds; point of origin; c, export pack, 295,000 pounds; d, domestic pack, 198,000 pounds; destinations Schenectady. Lowest bidder was Cowles Chemical Co., Cleveland, item a, 6.76 cents; b, 6.7 cents; c, 7.16 cents; d, 7.1 cents; shipping point Skaneateles Falls.

National Wins Soap Award

National Chemical Laboratories, Philadelphia, won the award on 18,800 pounds paste soap in a recent opening for miscellaneous supplies by Federal Supply Service, New York, with a bid of 7 cents per pound.

Medicinal Soap Awards

A recent opening for miscellaneous supplies by Armed Services Medical Procurement Agency, Brooklyn, included item 1) 28,800 four-ounce cakes of surgical soap, and item 2) 5,952 bottles of liniment of soft soap. Allen B. Wrisley Co., Chicago, won the award on item 1 with 8 cents domestic and 8.7 cents for overseas and Standard Drug Co., Newark, on item 2 with 9.5 cents.

Navy Cleaner Bid

Painted surface cleaner, 72,000 pounds, for a, Boston, b, Newport, c, Bayonne, d, Norfolk, e, Cherry Point, f, Pensacola, g, San Diego, h, San Pedro, i, Oakland, j, Seattle, and k, Bremerton, was included in a recent opening for miscellaneous supplies by the Navy Purchasing Office, New York. Among lowest bidders were Murro Chemical Co., New York, items a and b, 11.1 cents; items c and d, 9.8 cents; item e, 11.5 cents; item f, 12 cents; g, 11.9 cents; h, 11.4 cents; k, 13 cents; Turco Products Inc., Los Angeles, item i, 11.57 cents; and Clarkson Laboratories, Philadelphia, item j, 11.85 cents.

FSS Award to Lever

Lever Brothers Co., New York won the award on 38,000 pounds of soap with a bid of 6.25 cents per pound in a recent opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C.

Navy DDT Bid

DDT emulsion concentrate, 30,000 gallons, was included in a recent opening for miscellaneous supplies by Navy Purchasing Office, New York. Lowest bidder was Keiner Co., Newark, with 54.5 cents for a, Philadelphia, b, Mechanicsburg, c, Norfolk, and 78.5 cents for d, Bremerton.

Cleaning Compound Bid

On 132,000 pounds of globular toilet bowl cleaning compound in a recent opening for miscellaneous supplies by Navy Purchasing Office, New York, for a, Boston, b, Newport, c, Bayonne, d, Philadelphia, e, Portsmouth, Va., f, Pensacola, g, Great Lakes, h, Irvine, i, Oakland, the following low bids were submitted: Murro Chemical Co., Portsmouth, c, 10.9 cents, d, 11.65 cents, f, 13 cents, i, 12.5 cents; Judson Dunaway Corp., Dover, N. H., a, 10.32, b, 10.87 cents; h, 13.04 cents; Climalene Co., Canton, O., e, 12.1 cents, f, 13 cents, g, 9.6 cents.

Awards on Bar Soap Bid

In a recent opening for miscellaneous supplies by the Quartermaster Purchasing Office, New York, the following firms won awards in an opening for bar soap: Mt. Hood Soap Co., Portland, Oregon, 800,000 bars, $46,880; North Coast Chemical & Soap Works, Seattle, 300,000 bars, $18,570; National Soap & Chemical Co., Tacoma, 1,200,000 bars, $76,200; Pioneer Soap Co., San Francisco, 800,000 bars, $39,680; Western Soap and Sales Co., Spokane, 200,000 bars, $11,900; Gillam Soap Works, Fort Worth, 1,000,000 bars, $40,114.40; Procter & Gamble Distributing Co., Cincinnati, 1,320,000 bars, $72,996; Newell Gutradt Co., San Francisco, 540,000 bars, $30,078; Colgate-Palmolive-Peet Co., Jersey City, 1,127,000 bars, $56,244.69; Stahl Soap Corp., Brooklyn, 1,000,000 bars, $65,300; Haskins Brothers & Co., Omaha, 4,000,000 bars, $163,308.

Hand Cleaner Award

A recent opening for miscellaneous supplies by Navy Purchasing Office, New York, included 14,600 pounds of hand cleaner for a, Davisville, b, Great Lakes, c, San Diego, d, Long Beach, e, San Francisco, f, Oakland, g, Cleveland, h, Seattle, and i, Bremerton. Hillcrest Laboratories, Spring Valley, N. Y., submitted the lowest bids as follows: destination a, 17.5 cents; b, 19 cents; c through f, 23 cents; g, 22.5 cents; h and i, 23 cents.

Navy Steam Cleaner Bid

Steam cleaning compound, 105,000 pounds, was part of a recent opening for miscellaneous supplies by Navy Purchasing Office, New York. Low bids were submitted on destination a, Newport, 8.91 cents and b, Charleston, 9.69 cents, by Turco Products, Los Angeles, and on destination c, Oakland, 8.13 cents by Continental Chemical Co., North Sacramento.

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NEW Trade Marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U.S. Patent Office in compliance with section 12(a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of $25 must accompany notice of opposition.

Mortalin—This for rat poison. Filed April 24, 1951 by A. S. Mortalin, Hasley, Denmark. Claims use since May 21, 1949.

V—This for the control of cattle grubs, or as flea dusting powder for dogs. Filed September 22, 1951 by Armour & Co., Chicago. Claims use since February 27, 1948.

Bakers—This for hydrogenated castor oil. Filed November 20, 1951 by Baker Castor Oil Co., Jersey City, N. J. Claims use since 1920 as to the mark.

Huntolene—This for antiseptic floor treatment. Filed June 16, 1952 by Huntington Laboratories, Inc., Huntington, Ind. Claims use since December 15, 1939.

Ultrapole—For soap solutions, detergent bases, and surface active materials used as detergents, and as ingredients of detergents. Filed March 26, 1951 by Ultra Chemical Works, Inc., Paterson, N. J. Claims use since January 1929.

Na-sul — This for alkylated naphthalene sulfonates. Filed May 31, 1951 by King Organic Chemicals, Inc., Norwalk, Conn. Claims use since October 23, 1951.

Velsicol—This for insecticides and fungicides generally. Filed June 26, 1952, by Velsicol Corp., Chicago. Claims use since June 20, 1952.

Ranee—This for foot powders, and tooth cleansing pastes. Filed October 15, 1951 by Hindu Products Mfg. Corp., Chicago. Claims use since December 1923.

Consodent—This for dentifrice. Filed May 5, 1952 by Consumers Home Products, Inc., Brookline, Mass. Claims use since March 31, 1952.

Peerless—This for tallow, used in soap-making. Filed February 13, 1951 by Consolidated Rendering Co., Boston. Claims use since January, 1901.

4 C's—This for surface cleaning compound in paste form. Filed June 6, 1951 by Capital City Cleaner Co., Washington, D. C. Claims use since January 1, 1923.

"Four Seas"—This for surface cleaning compound in paste form. Filed June 6, 1951 by Capital City Cleaner Co., Washington, D.C. Claims use since January 21, 1949.

Liquisan—This for liquid type paint and varnish remover. Filed January 2, 1952 by J. F. Kerns Co., Chicago. Claims use since February 1945.

Duz O Matic—This for soluble cleaner, cleanser, and detergent. Filed May 21, 1952 by Procter & Gamble Co., Cincinnati. Claims use since April 14, 1952.

Sanitary Sam's—This for scouring cleanser. Filed May 24, 1952 by John Sexton & Co., Chicago. Claims use since February 26, 1952.

Soft Touch—This for shampoo. Filed July 3, 1952 by Gillette Co., Boston. Claims use since April 1, 1952.

Nam-O-Lize — This for liquid polish for use on automobiles and similar lacquered surfaces. Filed January 7, 1952 by Tannerize Polish Co., Chicago. Claims use since June 1950.

Dupli-Color—This for automobile polish. Filed July 19, 1952 by Dupli-Color Products Co., Chicago. Claims use since December 29, 1947.

Secto-Aire — This for lindane insecticide. Filed June 30, 1951 by Kay Electric Co., Brooklyn, N.Y. Claims use since May 10, 1951.

EB-7—This for fumigant. Filed July 13, 1951 by Dow Chemical Co., Midland, Mich. Claims use since June 19, 1951.

Alro—This for germicides for household and industrial purposes. Filed October 5, 1951 by Alrose Chemical Co., Cranston, R.I. Claims use since 1947.

Secto-Vap Insecticides — This for insecticide. Filed November 27, 1951 by Cardinal Chemical Corp., Philadelphia. Claims use since May 4, 1951.

Jungle — This for insecticide. Filed February 5, 1952 by R. M. Hollingshead Corp., Camden, N.J. Claims use since April 1947.

Kilcop "53"—This for fungicide. Filed February 9, 1952 by Kilgore Seed Co., Plant City, Fla. Claims use since September 1951.

K-Ram—This for ready-to-use rat and mouse bait containing warfarin. Filed February 13, 1952 by Kempfert's Veterinary Supply Co., Monroe, Wisc. Claims use since December 14, 1951.

Diverside—This for insecticide in liquid form. Filed July 8, 1952 by Diversey Corp., Chicago. Claims use since June 20, 1952.

Mercury—This for moth preventive. Filed July 19, 1952 by A-M-R Chemical Co., Brooklyn, N. Y. Claims use since 1946.

Dynaltone—This for antiseptic preparation used for disinfection of instruments. Filed August 11, 1952 by Cook-Waite Laboratories, Inc., New York. Claims use since July 25, 1952.

Lucky Dog—This for dog deodorant with insecticide properties. Filed February 19, 1952 by Henry Raskin, Detroit. Claim use since January 25, 1952.

Gee Shine—This for detergents for general household cleaning purposes. Filed December 3, 1948 by Gee Eye Chemical Co., Tyrone, Pa. Claims use since June 1, 1948.

Calamalic — This for laundry soap. Filed February 23, 1950 by Cal Products Co., Los Angeles. Claims uses since September 30, 1948.

Dirtex—This for cleaning compound for painted and washable surfaces. Filed September 23, 1950 by Savogran Co., Boston. Claims use since August 4, 1950.

Targo—This for use on painted and unpainted metal and wood surfaces. Filed September 30, 1950 by Simoniz Co., Chicago. Claims use since January 1938.

Silva-Dry — This for cleaning silverware. Filed November 18, 1950 by Economics Laboratory, Inc., St. Paul. Claims use since June 13, 1949.

Windo-Clean — This for liquid window cleaner. Filed June 8, 1951 by Hillyard Chemical Co., St. Joseph, Mo. Claims use since January 1, 1934.

Tele-glo — This for cleaning lenses and other light-transmitting parts. Filed July 24, 1951 by Quality Lampost Co., Oceanside, N.Y. Claims use since April 17, 1951.

Y-610—This for rust remover and preventive. Filed December 7, 1951 by Yosemite Chemical Co., San Francisco. Claims use since December 7, 1947.

Pinofect—This for disinfectant and cleanser combined. Filed February 18, 1952 by West Disinfecting Co., Long Island City, N.Y. Claims use since January 1, 1916.

Westone — This for combined liquid cleanser, disinfectant, and deodorant. Filed February 18, 1952 by West Disinfecting Co., Long Island City, N.Y. Claims use since January 1, 1941.

Wolverine—This for all purpose cleaner. Filed July 12, 1952 by Emerson & Coidits, Bay City, Mich. Claims use since July 5, 1952.

Formite—This for spray deodorant for industrial use. Filed February 18, 1952 by West Disinfecting Co., Long Island City, N.Y. Claims use since January 1, 1932.

Mistosect—This for liquid insecticide. Filed February 18, 1952 by West Disinfecting Co., Long Island City, N.Y. Claims use since March 1, 1935.

Xy-12—This for liquid disinfectant and germicide for industrial and food plant sanitation. Filed March 13, 1952 by Klenzade Products, Inc., Beloit, Wis. Filed March 13, 1952. Claims use since December 1, 1941.

Hy-Line—This for insecticides and disinfectants. Filed April 25, 1952 by Pioneer Hi-Bred Corn Co., Des Moines, Ia. Claims use since December 19, 1949.

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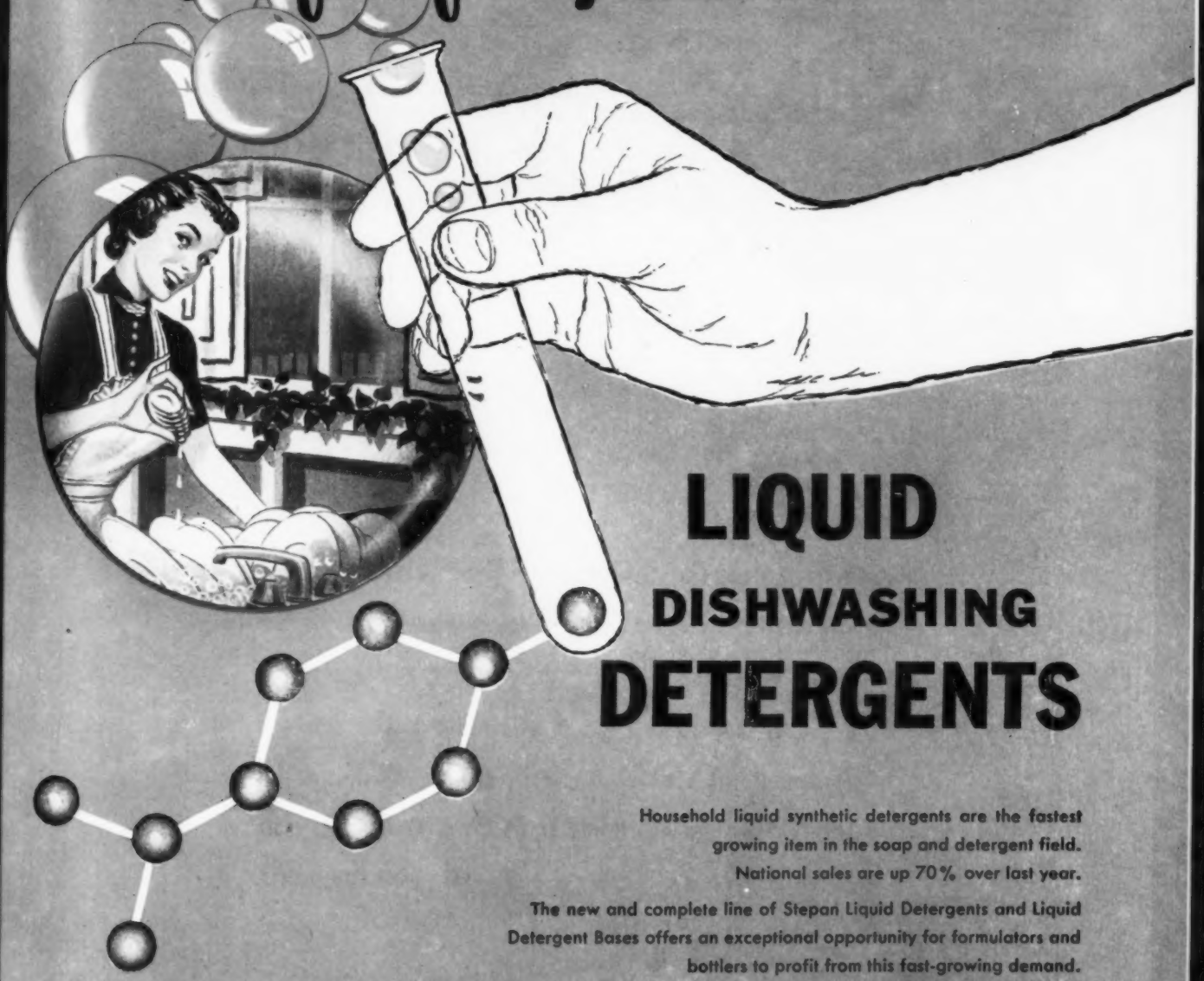

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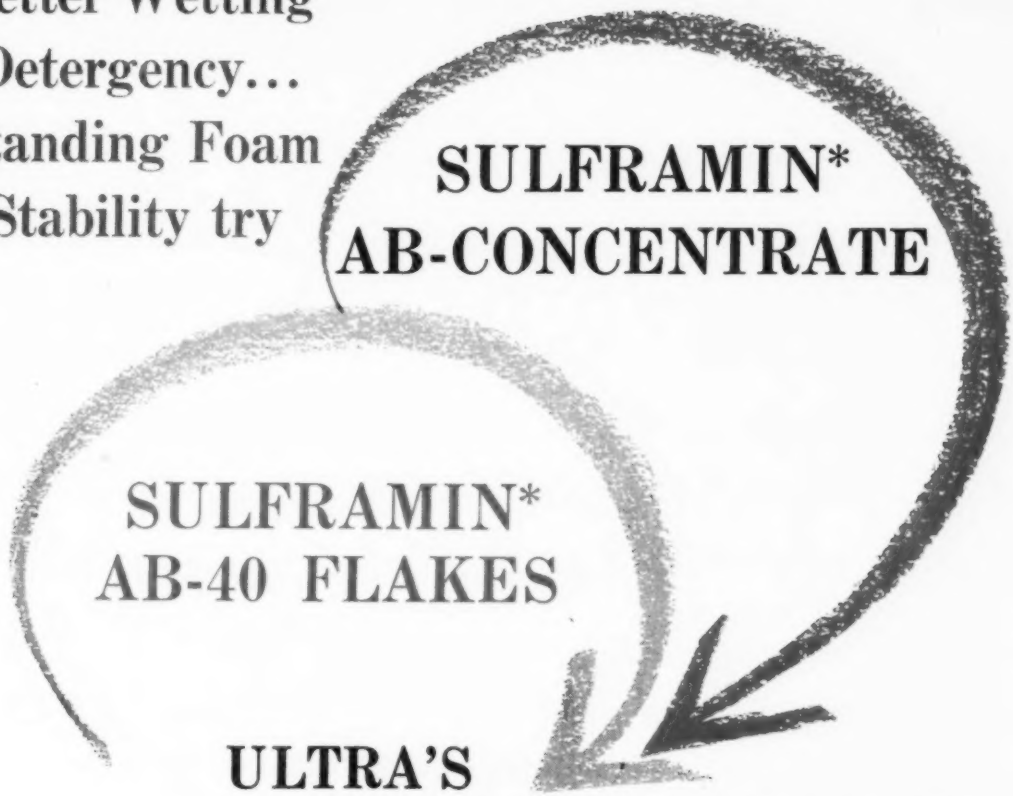

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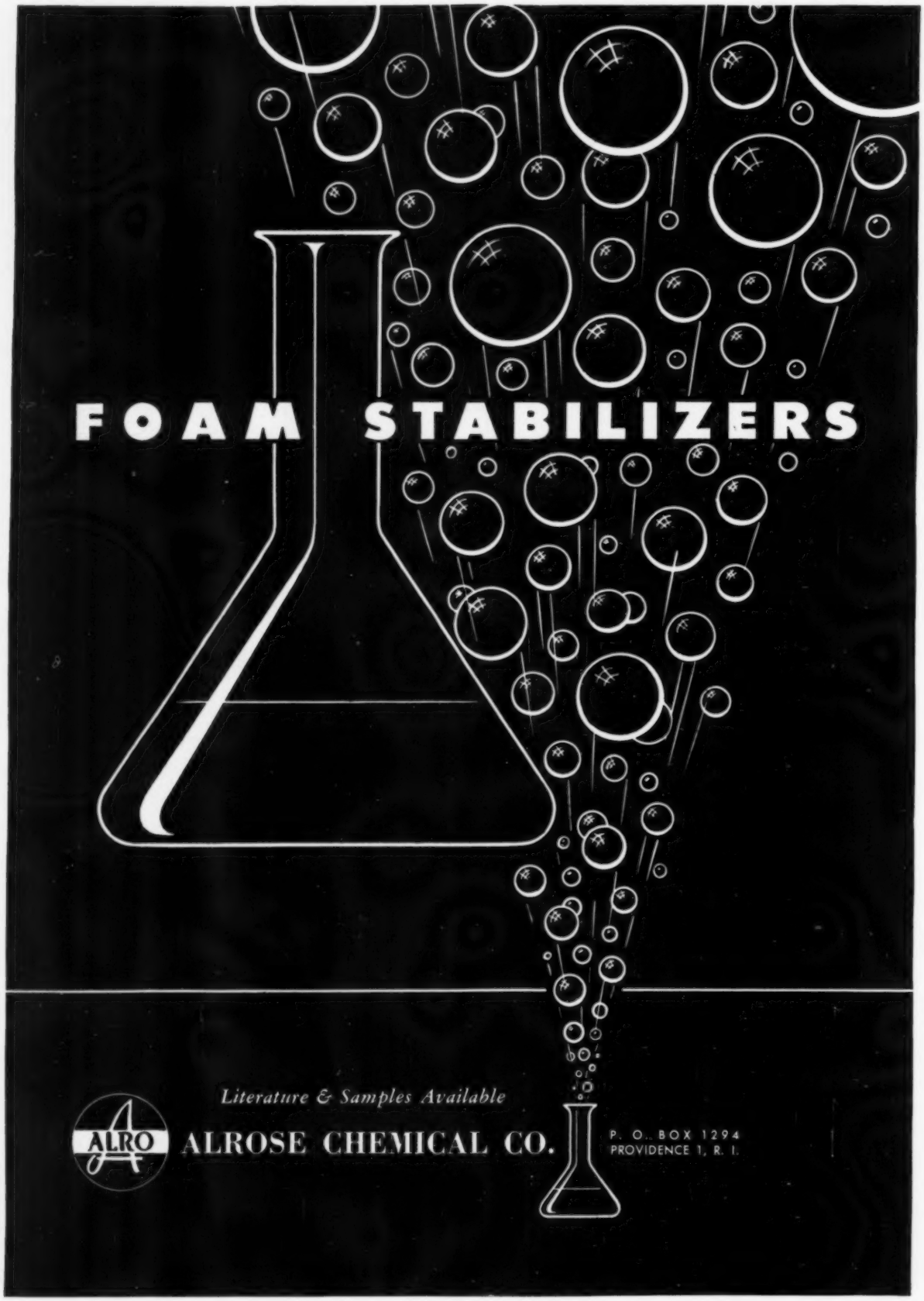
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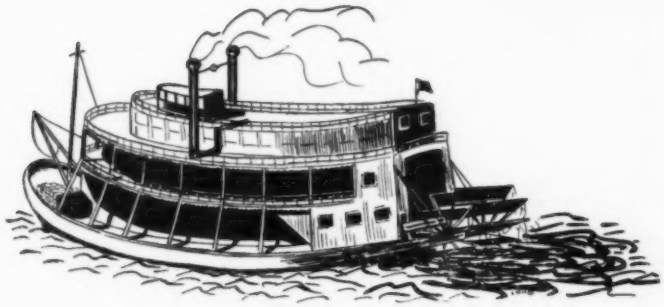

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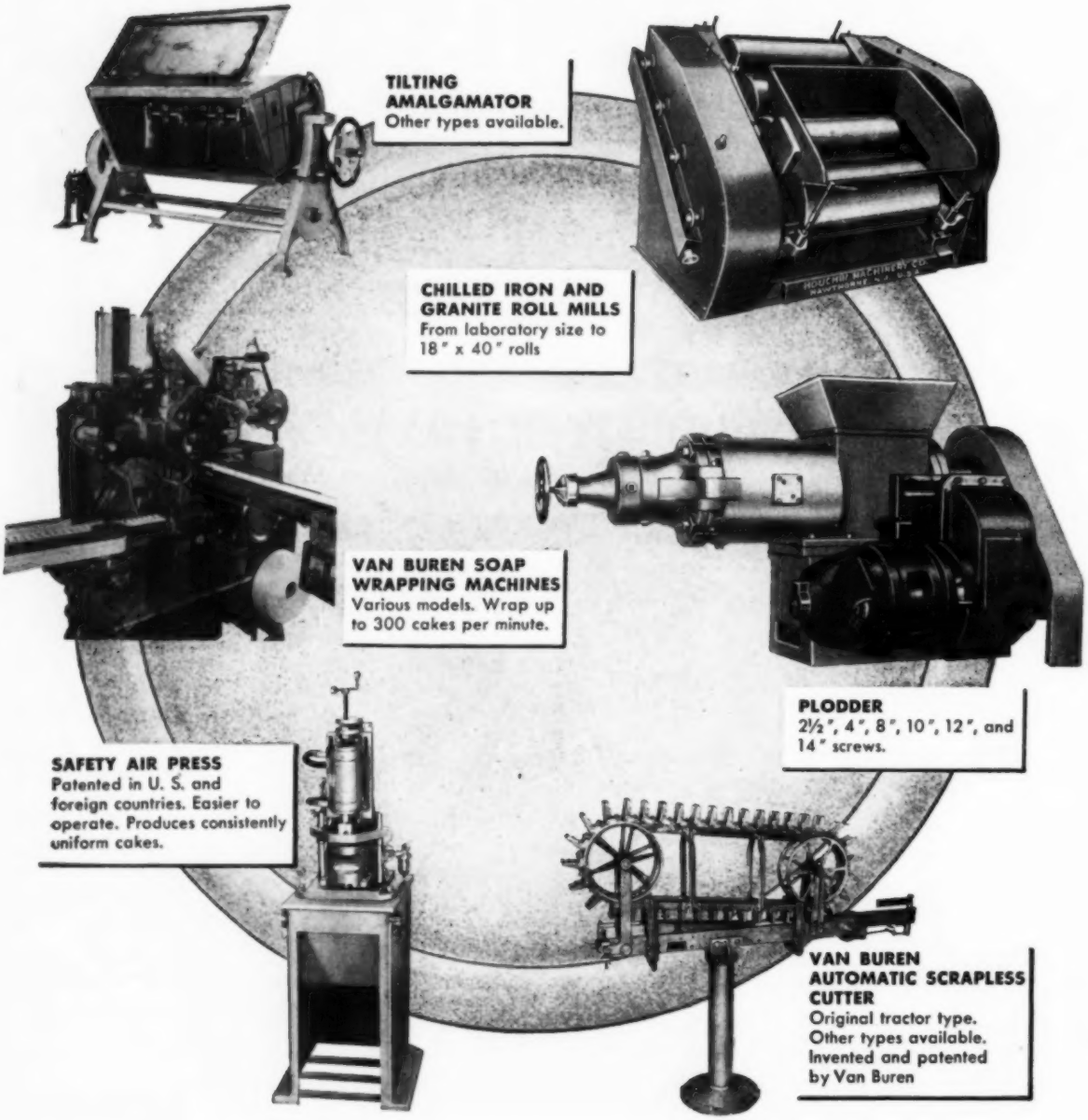

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D.C.M.X.–New Chlorophenol

By John Gemmell
Robert Haldane & Co., Ltd.
Paisley, Scotland

THE value of the chlorinated phenols generally as bases for the preparation of disinfectant and antiseptic products, would appear to have been realized first in Germany. The first systematic examination of the germicidal properties of substituted phenols was published by Bechold and Ehrlich[1] in the year 1906. These authors demonstrated that the introduction of halogen atoms into the phenol molecule brought about an increase in the bactericidal power and at the same time effected an appreciable reduction in the toxicity. It is interesting to note, at this point, that a claim was embodied in the original "Lysol" patent of 1889 for the use of chlorinated cresols and the statement is made in that specification that these chlorocresols give rise to preparations which are of greater bactericidal potency but of lower toxicity. It does not appear, however, that any chlorocresol based product was ever marketed by the original patentees.

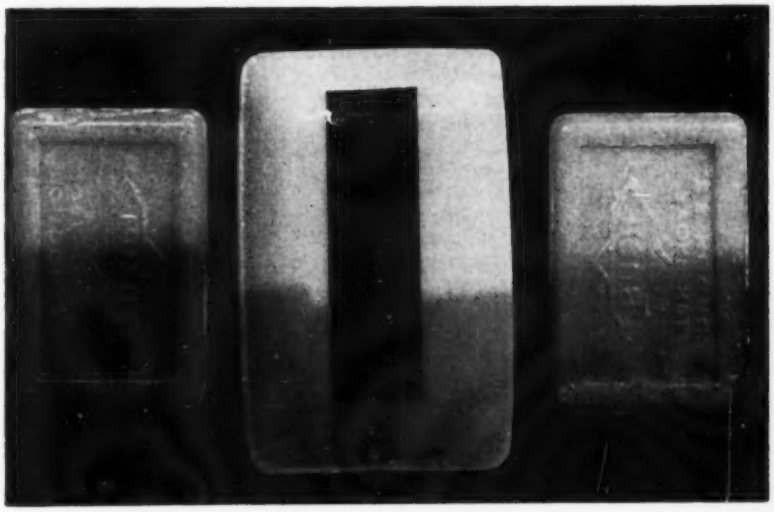
The first commercial preparation of a chlorinated xylenol seems to have been that carried out by Raschig[2] about the year 1912. This was the now well-known p-chloro-m-xylenol, popularly known nowadays as P.C.M.X. The following year patents were filed by the Schulke & Mayr Co. of Hamburg[3] covering the preparation of disinfectants containing Raschig's chloroxylenol, and a product was marketed by them under the trade name of "Sagrotan", which had for its active ingredient, a mixture in molecular proportions of p-chloro-m-xylenol and p-chloro-m-cresol. This product has been the subject of several research efforts in Germany[4,5] but does not appear to have attracted much attention elsewhere.

No further developments have been traced in the literature until 1927, when Schliemann[6] took out a patent for the manufacture of a disinfectant which had for its germicidal base, a mixture of isomeric monochloroxylenols obtained by chlorination of a specified coal-tar acid fraction and distillation of the crude product. The disinfectant fluid, marketed under the name of "Thissirol", consisted of approximately 29% of the chloroxylenol mixture, 10% of alcohol and 57% of a castor oil/potash soap, the fatty acid content of which was not specified. "Thissirol" appears to have been very well received in Germany and an excellent review of its properties by comparison with those of "Lysol" and "Sagrotan" is to be found in a paper by Sabalitschka and Bohm.[7]

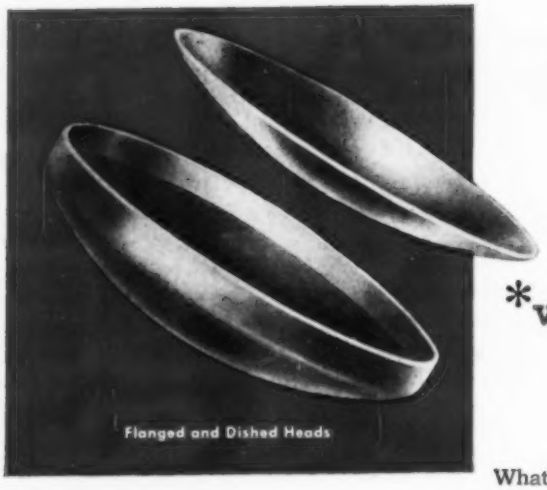
In Britain, the first chloroxylenol based antiseptic fluid was introduced in the early 1930's and received its first notice in a paper by Colebrook and Maxted[8] in 1933. This product was a fairly expensive one and its use was, and in fact still is, mainly confined to the medical and surgical fields; it was not until the imposition of severe government restrictions upon the use of pine oil in disinfectants, as a wartime economy measure, that the chlorophenols made any real impact upon the market for household disinfectants in the U. K. Since their adoption, however, a little over ten years ago, they have superseded to a very large extent, all of the older types of disinfectant.

Although Bechold and Ehrlich[1] had pointed out that the bactericidal activity of the phenols could be further increased and the toxicity reduced again by the introduction of additional halogen atoms into the molecule, no particular attention appears to have been paid to this fact either in Germany or elsewhere. The preparation of several dichloroxylenols has been described but no record has been traced of any attempt to apply them as disinfectants until 1940 when H. J. Acheson, the managing director

Fig. 1. Discoloring effect of daylight on soaps containing hexachlorophene and D.C.M.X.



heads---you win *



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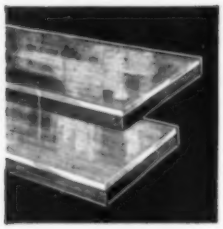

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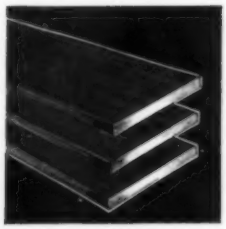

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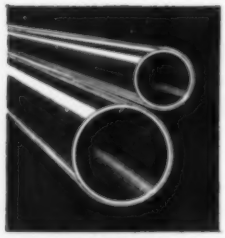

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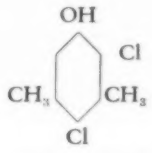
of the author's company prepared 2:4-dichloro-3:5-dimethylphenol and investigated the properties of disinfectant fluids based upon it. Early results indicated that this particular chloroxylenol had outstanding bactericidal properties and subsequent work has not only confirmed the original figures but has brought to light properties which give D.C.M.X., as the compound has come to be called, a unique position amongst the chlorophenols.

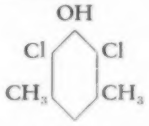
Chemistry

D.C.M.X. as already mentioned is 2:4-dichloro-3:5-dimethyl phenol or 2:4-dichloro-sym.-m-xylenol, corresponding to the structural formula:



The first account of the preparation of the compound is to be found in a paper by Lesser and Gad,[9] who produced it by direct chlorination of sym-m-xylenol in chloroform solution. These authors give no information regarding the properties of the compound, merely recording a melting point of 95°C.

No further references have been traced in the literature until 1941, when Jones[10] described its preparation from p-chloro-m-xylenol by the chlorination method of Orton and King.[11] Jones has recorded the melting points of 13 ethers which he prepared from the compound, but records a melting point of only 83°C for D.C.M.X. itself. The difference between the melting points given by Lesser and Gad and by Jones has caused Huntress[12] to conclude that the former authors had prepared the 2:6-dichloro-isomer:



Careful repetition of the work of both authors has confirmed however that both did in fact prepare the same compound, namely the 2:4-dichloroxylenol melting at 95°C and it has not been found possible so far, to prepare the 2:6-isomer either by direct or indirect means. It is of interest to note that although Jones has reported an incorrect figure for the melting point of the parent substance, the melting points of the ethers which he records have been found to be correct.

Properties

WHEN pure, D.C.M.X. occurs as a white crystalline powder having a characteristic odor and melting at 95°C, the commercial material is creamy-white to buff in color and melts between 92 and 94°C. The compound is volatile in steam, sublimes fairly readily and is very sparingly soluble in water, the solubility being only of the order of one part in 5,000 at 20°C. The solubility in most organic solvents, however, is high as will be seen by reference to Table I which sets out in round figures the solubility in a selection of solvents most likely to be of practical importance.

Contrary to the claim of Lesser and Gad,[9] it has been found to be relatively simple to introduce a third chlorine atom into the D.C.M.X. molecule. The resulting 2:4:6-trichloroxylenol crystallizes from benzol or petroleum ether in glistening needles which melt at 175°C. The bactericidal properties of this compound have not been fully investigated but such preliminary work as has been carried out would not seem to indicate any distinct advantages over the dichloro-compound and its very low solubility makes it difficult to incorporate into most of the usual types of preparations.

No simple test has yet been devised for the identification of D.C.M.X. in preparations containing it, but in the majority of cases in which identification is called for it should be found possible to isolate a sufficient quantity of the compound by steam distillation or solvent extraction to enable the melting point to be determined and for one or more of the following derivatives to be prepared as confirmation:

(1) p-nitrobenzyl ether m.pt. 157°C
(2) 3:5-dinitrobenzoyl ester m.pt. 160°C
(3) phenoxyacetic acid m.pt. 147°C

The p-nitrobenzyl ether is perhaps the most readily prepared; it crystallizes well and gives a sharp melting point. A useful technique for the separation of D.C.M.X. from antiseptic and disinfectant fluids is the Lancet Acetone-Baryta method[13] in which the soap and inert ingredients are removed as an insoluble mass by treatment with barium hydroxide while phenolic materials pass into solution as barium phenates and may be recovered by extraction of the acidified solution with ether.

Perhaps the simplest method for estimation of D.C.M.X. is determination of the chlorine content of the preparation under examination and calculating the D.C.M.X. content from this figure. Chlorine content x 2.69 gives D.C.M.X. content providing, of course, that no other chlorine compounds are present in the material.

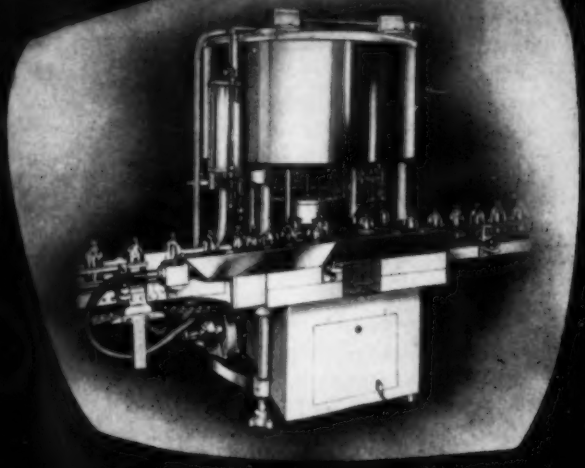
TABLE I
SOLUBILITY OF D.C.M.X. IN SOME COMMON SOLVENTS

SOLVENT	SOLUBILITY (gm/100ml @ 15°C)
Alcohol (95%)	46
Isopropyl Alcohol	47
Acetone	73
Amyl Acetate	47
Benzyl Acetate	38
Ethyl Ether	59
Carbon Tetrochloride	10
Chloroform	25
Benzene	14
Toluene	15
Pet. Ether (80/100°)	4
Terpinolene	35
Terpineol	60
Pine Oil	50
Citronella Oil	30

Bactericidal and Fungicidal Properties

THE first bacteriological tests carried out upon samples of preparations containing D.C.M.X. showed that the material possessed germicidal properties far in excess of those of any other chlorophenol available at that time and in view of this, an extensive program of testing was carried through. The results confirmed in detail, the earlier figures and established the material as an effective and reliable germicide.

When tested by the British Standard Rideal-Walker technique the phenol co-efficient of D.C.M.X. against the standard strain of E. typhi is 250 and against the standard strains of Staph. aureus and Strep. pyogenes



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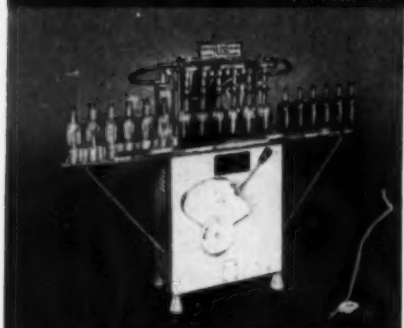

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180 and 160, respectively. Reports upon the use of antiseptic fluids in hospitals indicate that results of a comparable order are obtained against a wide range of pathogenic organisms.

In addition to its action against bacteria, D.C.M.X. has been found to be a highly effective fungicide and mould inhibitor and has found application in a wide variety of products.

Toxicity

DURING the twelve years throughout which D.C.M.X. has been manufactured and used, no single case of skin irritation or of toxic symptoms has been brought to the notice of the manufacturers.

Toxicity tests upon white mice indicate a median lethal dose of 6 gm. per kilo body weight, a figure which far exceeds that for any other chlorophenol. The high phenol co-efficient introduces an additional "factor of safety" since the quantity of D.C.M.X. which need be incorporated into any preparation will always be small.

Disinfectants and Antiseptics

THE first and still the widest field of application for D.C.M.X. is the manufacture of disinfectant and antiseptic fluids in which its high phenol co-efficient, the wide range of organisms controlled and its freedom from toxic or irritant properties, have given it obvious advantages over all other chlorophenols.

The type of disinfectant fluid in greatest demand in the U. K. is that popularly described as a "pine" disinfectant. Such a fluid is normally required to have a phenol co-efficient of between 3 and 5 consequently will contain between 1.2 and 2% of D.C.M.X. A typical formula for a product of this nature is:

Castor Oil Soap (25% oil)	26%
D.C.M.X.	1.5%
Pine Oil	5%
Water to make	100%

The normal method of preparation is to dissolve the D.C.M.X. in the pine oil, heating if necessary to effect dissolution, and to add this mixture to the soap solution which has been brought up to a temperature of 50-60°C. After mixing until thoroughly homogeneous, the fluid is diluted to the required volume by the gradual addition of water, thorough mixing being maintained during the addition.

The pine oil, in fluids of this type, is frequently replaced by such products as terpineol, terpinolene, phellandrene and dipentene or by mixtures of two or more of these in various proportions. Small amounts of other perfuming ingredients such as Lemongrass Oil, Citronella Oil, Thyme Oil, etc. are also added on occasion to impart a distinctive odor to individual preparations.

In the U.S.A. where pine oil is in free supply, pine fluids normally contain not less than 60% of pine oil and depend upon this alone for their germicidal action. Pine oil, however has no action against Staph. aureus and as a consequence fluids based solely upon it have a very limited field of application. The inclusion of D.C.M.X. in the make up of a fluid of this type enables this defect to be overcome and one manufacturer in the U.S.A. has commenced manufacture of a pine fluid containing D.C.M.X. Preliminary tests have indicated that a phenol co-efficient of about one against Staph. aureus is obtained by the addition of 3% D.C.M.X. to a product containing 60% of pine oil, whilst the co-efficient against E. typhi is raised to at least 10. Whilst the "Staph Value" obtained in this instance is admittedly low in proportion to the amount of D.C.M.X. employed it is sufficiently high to be of real practical value since it makes possible the preparation of a fluid which will meet the requirements of the F.D.A. pine disinfectant specification and will have in addition a significant action against Staph. The depressing action of high concentrations of pine oil upon the Staph. co-efficients of all other germicidal bases tested by the author has ruled out their use for such a purpose. Where it is not required that the F.D.A. specification be met a fluid with a much reduced pine oil content may be formulated in which the maximum Staph. co-efficient of D.C.M.X. may be realized at a cost well below that of the usual pine oil fluid.

Fig. 1. Inhibition of light-discoloration of detergent containing D.C.M.X. by terpinolene.

Mould Inhibition

IN the sphere of mould inhibition, as in that of disinfectants, the value of D.C.M.X. is substantially enhanced by its freedom from toxic or irritant properties.

The leather trade was the first to employ D.C.M.X. as a mould inhibitor, and consumption of the material by this industry has risen steadily since its introduction.

When tested by the method of Musgrave and Turner,[14] D.C.M.X. at concentrations up to 0.3% gives protection at least equal to that provided by p-nitrophenol, the most widely used leather preservative, but at higher concentrations, the advantages of D.C.M.X. become much more obvious. In one series of tests carried out by an independent authority, samples treated with 0.6% D.C.M.X. were the only ones on which it was found impossible to produce mould growth over a period of 109 days, p-nitrophenol, which was the nearest competitor of all other compounds tested, failed after 72 days. In tannery practice where the method of applying the preservative to the leather differs materially from the laboratory test technique, the results reported by users of D.C.M.X. are well in advance of the laboratory figures, but since precise details of the various methods of application are not available, it would be unwise to base specific claims upon these reports. D.C.M.X. is substantive to leather and being virtually insoluble in water, is not readily leached out, features which are of the utmost value in the treatment of military

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leather equipment; in addition, its freedom from toxic or irritant properties make it particularly suitable for the treatment of leathers intended for the manufacture of footwear.

Remarkable results have been reported concerning the use of D.C.M.X. for the preservation of adhesives and related products based upon glue, starch, dextrin and casein. Concentrations as low as 0.01% of the weight of the dry ingredients have given complete protection against mould attack to many such products, although concentrations up to 0.1% have been found necessary in other cases. Speaking generally it may be said that starch and dextrin products will require lower amounts than those containing glue or casein and products containing large amounts of water will be more difficult to protect than more concentrated preparations.

Although the solubility of D.C.M.X. in water is very low, the amount which it is necessary to employ in products of this nature is normally so small that mixing of the finely powdered material with the other dry ingredients before incorporation of the water will give satisfactory results in a great number of instances; where this method is found to be inconvenient or unsuitable, a solution of the preservative in alcohol or other appropriate solvent may be added either to the finished product or at any convenient stage of the manufacturing process. In those circumstances where a water soluble preservative is imperative, the sodium salt of D.C.M.X. may be employed; this compound, however has a rather lower activity than the free phenol and it will be necessary to increase the amount employed by approximately 20%.

One of the fundamental advantages of D.C.M.X. over most, if not all of the other industrial preservatives in common use, lies in its ability to protect carbohydrate and protein solutions, not only against moulds and fungi, but against most of the bacteria which give rise to putrefaction in these materials. Two reports received recently from users emphasize this point. The first, from a large paint manufacturer, stated that of all the products which had been tested as preservatives for a casein based emulsion paint, D.C.M.X. alone had proved capable of affording protection against attack by both moulds and bacteria, all of the others had protected against moulds only and serious losses had arisen as a consequence of attack by bacteria. The second report came from a manufacturer of fire extinguishers who was using a hydrolyzed protein solution in foam equipment.

The solution he was employing was very sensitive to attack by moulds and bacteria and again D.C.M.X. was the only material found to be capable of affording the required double protection. The most striking feature of this case was the extremely low concentration which was found to be effective; .005% was found to preserve the solution for a period of at least four months.

TABLE II

SOAP

TIME (hours)	Unmedicated			Hexachlorophene (2%)			D.C.M.X. (2%)		
	Bacterial Counts								
0	4	62	2	4	0	11	7	0	4
½	76	70	17	16	7	17	21	17	26
1	304	110	94	40	21	26	40	24	28
2	1,100	921	817	46	40	111	46	32	30
3	—	—	—	60	60	132	91	36	104
4	—	—	—	71	78	146	102	111	111
5	—	—	—	97	211	241	104	117	114
6	—	—	—	438	714	531	117	206	207

Soap

UNTIL the introduction of hexachlorophene by Givaudan-Delawanna Co., around 1942, no germicidal agent was known which had any real value when incorporated into toilet soap.

An excellent review of the situation prior to the introduction of hexachlorophene is to be found in a paper by Diasio[15] and of the subsequent position in the papers by Gump[16] and Maglio.[17]

The fact that D.C.M.X. was effective when incorporated into soap was not confirmed until some two years ago but experience over that period would suggest that it compares very favorably with hexachlorophene in this application.

The effectiveness of both compounds would appear to be due in the main to their being in some way substantive to the skin since tests made upon solutions of soaps containing them, according to the F.D.A. or Rideal-Walker techniques do not yield impressive results; hand-washing tests, however, carried out according to the methods proposed by Price[18] or Udinsky[19] give a very different picture.

Table II sets out the results of one series of tests performed in a large fever hospital in Scotland by a modified Udinsky technique. The subjects, who comprised mainly office and laboratory staff, were divided into three groups, one of which used unmedicated soap to act as control. The hand washing was carried out in a normal manner, no elaborate surgical scrub being attempted, and swabbings were taken from the entire surface of one hand at appropriate intervals and plated out. The subjects carried on with their normal duties throughout the course of the experiment, no precautions being taken to avoid reinfection from external sources. The results demonstrate that under these conditions it may be claimed that D.C.M.X. is fully comparable with hexachlorophene.

Repeated tests with soaps from different manufacturers have made it clear that the nature of the soap stock used has no significant influence upon the effectiveness of D.C.M.X.

The question of discoloration on exposure to light of soap cakes containing D.C.M.X. has been raised as an argument against its use, but in this respect both D.C.M.X. and hexachlorophene seem to be equally vul-

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nerable to criticism. Fig. I is a photograph of three soap cakes, the larger center tablet containing 2% of hexachlorophene and the smaller tablets alongside containing 2% of D.C.M.X. All three were suitably masked with opaque paper and exposed in the laboratory window for three days. Appreciable discoloration has taken place in all three and although the difference is not clearly perceptible in the photograph, the left hand sample of D.C.M.X. soap has discolored to a noticeably less extent than the other two. The difference must be ascribed to the perfume compound employed. The left hand sample was perfumed with a "pine" compound and it would appear that materials of this type are capable of inhibiting, to a very marked extent, the darkening effect of light upon soap containing D.C.M.X. This phenomenon is more strikingly illustrated in Fig. II which shows two samples of a dishwashing detergent based upon a secondary alkyl sulphate. Both samples contain 2% of D.C.M.X. but the sample on the right contains in addition 2% of terpinolene. The samples were exposed to light for several weeks and it was found that no darkening whatever had taken place in the sample containing terpinolene the extent of the darkening in the unperfumed sample is very obvious in the photograph. Whether these pine products have any value as inhibitors of discoloration in soaps containing hexachlorophene has not been determined but the question would seem to merit investigation by users of that material.

The one point regarding which criticism might logically be directed at D.C.M.X. is the fact that it is not odorless. Whilst this might limit its use to some extent in those toilet soaps which base their attractions upon a delicate fragrance, it would be no disadvantage in soaps sold on a basis of germicidal action. One leading perfumery authority has given it as his opinion that the slight odor of D.C.M.X. is of such a character as to make it ideally suited for antiseptic soaps particularly in view of the fact that the consumer normally associates such an odor with antiseptic proper-

(*Turn to Page* 191)

PRODUCTION Clinic

By E. G. Thomssen, Ph.D.

THE problem of duplicating or simulating a competitor's chemical specialty item was discussed in this space last month. Closely allied to the developing of a product competitive to one that is selling well is the improvement of one's own products. This involves originality rather than mere imitation.

Generally, product improvement is sounder and more satisfactory than merely duplicating an existing and usually successful competitive item. End use or performance are not the only factors to be considered in improving a product. Better packaging, including improved package design and appearance, with their appeals to the senses, should not be overlooked. To a lesser degree product improvement may involve training factory personnel to practice greater care and neatness in processing and packaging procedures. Too often the human element is overlooked in making a preparation better and more acceptable to the purchaser. Products turned out by an alert, competent and experienced force generally reflect it. Conversely, it is not at all uncommon to find products coming on the market in sloppy fashion because of careless handling by plant employees. Such defects as crooked labels, soiled package exteriors or leaking packages and cartons are altogether too common. Overcoming these faults can be a definite part of product improvement. We mention them first because in many cases they are overlooked or regarded as unimportant.

Packaging details are not always given sufficient attention. Many of the items handled by sanitary chemical manufacturers are sold in bulk and in such limited quantities that lithographed containers cannot be used. However, one firm in the sanitary products field does have a process for decorating containers ("Color Affect Lithography", Fuld Brothers, Inc., Baltimore). Apart from "CAL", which is considerably less expensive than lithography, it is possible at

DR. THOMSSEN

small extra cost to have attractively printed labels available that add to the beauty of the package. In many cases reuse fibre drums or iron drums are used. Some manufacturers overlook the fact that second hand drums are unattractive and can build up the idea in the purchaser's mind that the contents are also second hand. When using reuse containers every effort should be made to make them look their best.

The sense of smell has a very important role in the evaluation of the quality of a product. All of us, almost unconsciously, place a sample of any item under our nose and sniff it. The impression we gain from the odor of the product can have considerable influence in evaluating the item. Most manufacturers are not too concerned how a product smells.

Sanitary chemicals, particularly, should, through their odor, give the impression that they are clean. In the case of deodorants and disinfectants, their smell should be pleasant or even absent, rather than commonplace or offensive. In our opinion entirely too much dependence is put on such odors as those of pine oil, paradichlorobenzene, citronella and cedar oil. Some enterprising individual, one of these days, is going to make a ten strike with a well perfumed line by stressing its pleasing odor more forcibly than has ever been done before.

The feel of an item can also be important in a study of ways of improving powdered and liquid preparations especially. A buyer very often will empty out a quantity of a sample submitted to him and rub it between his fingers. While this action is not too important in deciding its worth, he is influenced to some degree by his sense of feel and it may affect his decision to buy.

Powdered products may often be made more uniform in size and homogenity, as well as more readily water soluble, by passing them through a grinding mill after they are mixed. This makes them feel softer and less gritty. Liquids, especially emulsions, are improved by efficient agitation, or better still, by passing them through a colloid mill or a homogenizer. Salesmen have a good talking point when they are able to emphasize these improvements even though they do add slightly to the selling price.

While appeals to the eye and the senses of smell and touch are important in improving a product, the main role of product betterment lies in better, easier, more economical, and more satisfactory performance generally. While most companies realize this, there are still many who hesitate entirely too long to keep up with the procession. They remind me somewhat of a beautiful grandfathers clock I once saw on the West Coast. The owners of this clock pointed out with pride that the hands of the clock stopped at the very moment of the 1905 San Francisco earthquake. That was all very well, but the clock is useless because you cannot tell time by it. I know of manufacturers who point with pride that their products always have been made of the best natural products. They decry the use of the new synthetic chemicals even though synthetic chemistry has greatly improved on nature in many fields. It is courting disaster in business not to keep up to date. Wide awake manu-

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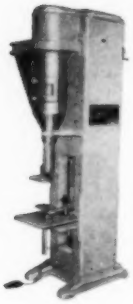

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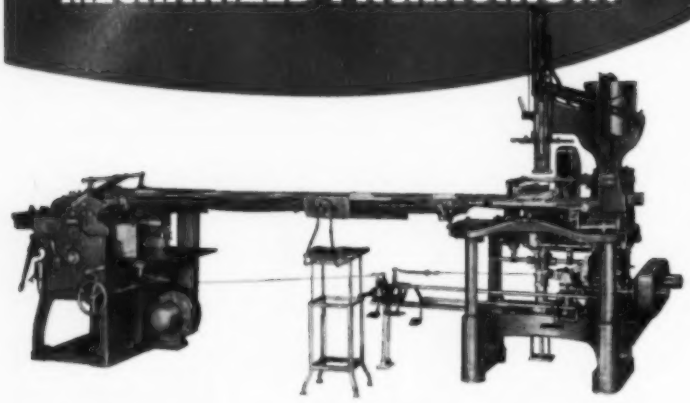

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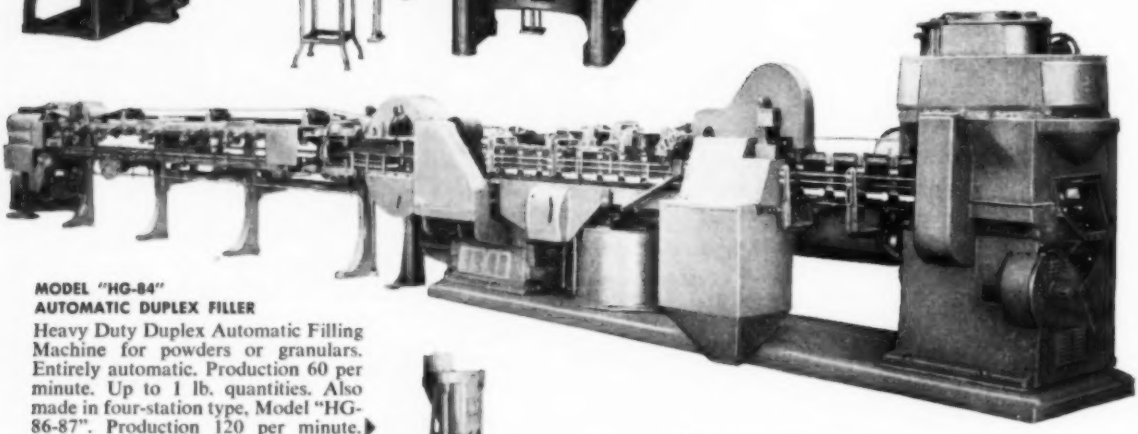
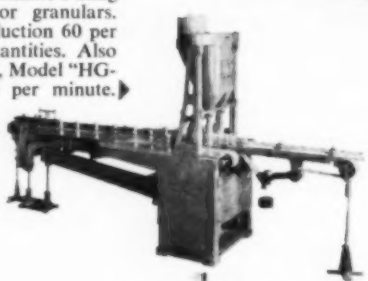
A complete paper box gluing, feeding and wrapping unit. Made in two sizes—Model "B" and Model "H". Completes up to 40 boxes per minute. Only one operator required. MODEL "B"—maximum: 20" x 15" x 4"; minimum: 6" x 4" x ½". Model "H"—maximum: 15" x 10" x 2¾"; minimum: 4" x 1¾" x ½".



MODEL "HG-84" AUTOMATIC DUPLEX FILLER

Heavy Duty Duplex Automatic Filling Machine for powders or granulars. Entirely automatic. Production 60 per minute. Up to 1 lb. quantities. Also made in four-station type, Model "HG-86-87". Production 120 per minute.

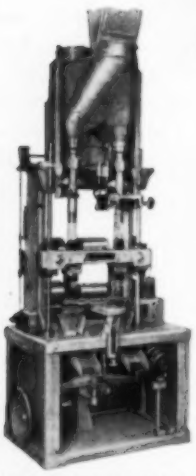


HIGH-SPEED NEVERSTOP CARTON FILLING & SEALING MACHINE

For free-flowing products. Feeds, fills and seals cartons, both top and bottom, in one continuous operation. Cartons 5 15/16" x 3 7/16" x 1 3/16" to 8½" x 6" x 2⅛". 60 to 200 or more per minute. One operator.

AUTOMATIC STRETCHRAP PACKAGING MACHINE

For wrapping odd shapes of articles or pieces, smoked meats, sausage, toys, etc. with heat sealing "Pliofilm". One operator required. Production 12 to 15 per minute.



STOKESWRAP AUTOMATIC PACKAGING MACHINE

Equipped with auger feed. Forms, fills and heat-seals the package, taking printed or unprinted web from roll stock. Volume to 56 cubic inches or 1 lb. 50 to 120 packages per minute.

...ENGINEERED BY STOKES & SMITH CO.

Bulletins upon request. If you have a packaging need, send sample of your product and our engineers will make proper recommendation.

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TRADE MARK

facturers never permit their products to be outmoded in performance. Like automobile makers they constantly improve them as new materials come into the market be they natural or synthetic. These companies are the trail blazers of new uses for new and improved products.

Hydrogenated Glycerides

ARCHER-DANIELS-MIDLAND CO., Minneapolis, now have available a wide variety of hydrogenated glycerides made from tallow, fish oils and vegetable oils. They feature particularly "Hydrofol T-57-N", a hydrogenated tallow glyceride. The low, iodine number (1.0 maximum) assures resistance to oxidation and decomposition even when stored for long periods. Where hard fats are required this product can be used successfully.

Versatile Filter

THE "Staynew Liquid Filter" made by Dollinger Corp., Rochester 3, N. Y., is said to possess a wide range of filtering area for any given space. It may be installed as a unit easily and quickly, according to the maker. The finest particles such as those of rust, pipe scale or others are removed with little diminution of pressure. A bulletin giving a full description is available upon written request.

Baby Microscope

AN imported baby microscope only five inches high is available at very low cost from Edmund Scientific Corp., Barrington, N. J. This instrument is easy to carry and gives excellent, sharp definition. Because of its low cost and ease of operation many manufacturers should be interested in obtaining them.

Freeze Proof Steam Traps

W. H. NICHOLSON & CO., Wilkes-Barre, Pa., are manufacturers of traps, valves and floats for steam pipe fitting installations. Among other items they offer a steam trap that drains completely. This device finds wide applications in spaces such as the out-of-doors, which are not continuously heated. The trap drains rapidly, is available in four types, is suitable for pressures up to 250 lbs. and is made in sizes of from ½" to 2".

Dust Collector

AN efficient dust collector for use in processing dry, dusty powders, in the soap and sanitary chemical field, is offered by Entoleter Div. of Safety Car Heating Co., New Haven, Conn. Known as the Simon Collector, it is a self-contained, all-metal unit that requires only a fan and connecting ducts. The cleaned air may be delivered right into the building as it is dust free. The collector operates under suction. It takes a one H.P. motor to operate a 12 section unit, hence power costs are low.

New Labeling Machine

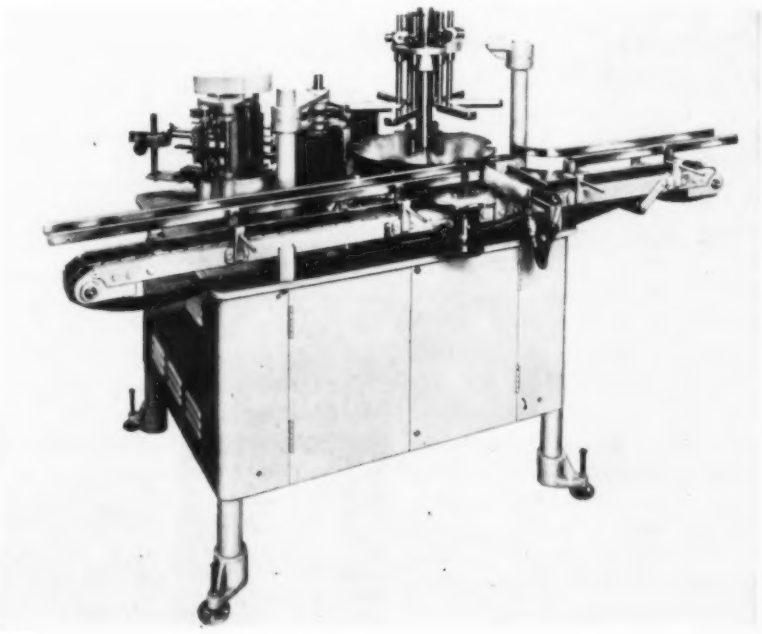
An automatic labeling machine with a capacity up to 75 containers per minute recently has been introduced by MRM Co., Brooklyn, N. Y. The company claims the machine is so simple in design that an unskilled operator can run it. The machine handles containers from fractional ounces to gallons, applying labels accurately and cleanly. Labels as small as postage stamps and up to five inches wide by six inches high, can be handled by the labeler. The labeler will securely affix paper or metal foil labels to any type of container such as cardboard, tin, plastic, metal or glass. Adhesive glue labeling machines can be converted to thermoplastic with just a few changes.

At the same time, the company announced that the personnel in attendance at the National Packaging Exposition in Chicago, April 20 will be: H. D. Manas, R. J. Dealy, F. X. Dealy, F. Rossetti, V. G. Gallagher.

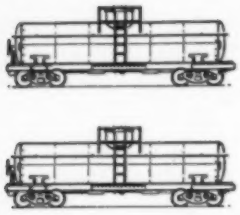
New Stapling Machine

A new retractable anvil stapling machine, the "Staple King," recently was placed on the market by International Staple & Machine Co., Herrin, Ill. The equipment is designed for simultaneous closing of tops and bottoms of center slotted cartons and partial or full overlap cartons—either corrugated or fibre, at the rate of more than 350 an hour. The retractable anvil feature of the stapler permits closure from the outside, after cartons are filled with merchandise. Air operated, the machine is semi-automatic, and stapling heads function when operator touches a foot pedal. A carton guide assists in correctly positioning cartons for stapling. This guide may be adjusted to accommodate different production runs involving a quantity of cartons of different sizes.

New MRM Automatic Labeling Machine.

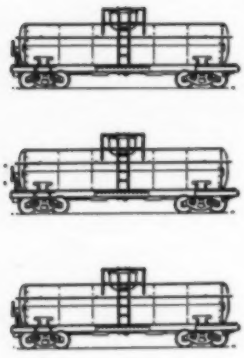


buying caustic soda



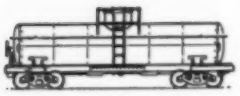
Purity was a special problem to a company manufacturing soap, cleansers and other household products. They needed caustic that was exceptionally clear in solution and contained a very low metallic content.

to better advantage



They found that Mathieson could supply caustic to their specifications; they found in addition, certain advantages of definite benefit to their operations. Deliveries were reliable due to Mathieson's diversified production facilities. Mathieson Technical Service was available for assistance with any production problem. And, as a major producer of soda ash, chlorine, ammonia, sulphuric acid, bicarbonate of soda, and hypochlorite products, Mathieson could furnish many of their other essential raw materials.

from Mathieson



These same advantages will be of benefit to you. You'll be sure of top-quality chemicals . . . multi-plant production facilities provide dependability . . . integrated delivery system assures on-time schedules. You'll find you can buy chemicals to better advantage—at any time—by consulting with Mathieson.

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sulphur • sulphuric acid • bicarbonate of soda
ammonia • sodium nitrate • sodium chlorite
hydrazine • sodium methylate • nitric acid
hypochlorite products • ethylene derivatives
dry ice and carbonic gas • methanol
ammonium sulphate

MATHIESON

MATHIESON INDUSTRIAL CHEMICALS COMPANY
Division of MATHIESON CHEMICAL CORPORATION
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Products and PROCESSES

New Floor Cleanser

A new low priced floor cleanser, claimed to have disinfectant properties, consists of a mixture of liquid sodium soaps with cresol and a sodium alkyl sulfonate with a carbon chain of medium length. The product can be diluted with water according to specific needs. British patent 613968.

Dip-Type Silver Cleaner

Thiourea is the tarnish-removing agent in new dip-type silver cleaners, according to the February-March issue of *Monsanto Magazine*, house organ of Monsanto Chemical Co., St. Louis. Sulfur compounds, carried by the air or, more often, found in foods such as eggs, readily combine with silver to form a dark film of silver sulfide. Thiourea reacts with this film to form a water-soluble compound that can be rinsed off. Thiourea does not attack the silver itself, according to the article.

A tarnished fork is said to emerge clean and shiny after having been dipped into a solution of this type cleaner for a few seconds. It should then be rinsed under a faucet before it is wiped dry. To clean larger pieces the solution should be wiped on with a sponge or cloth soaked in the cleaner. After the tarnish has disappeared the piece should be rinsed.

New Dust Inhibitor

A dust inhibitor suitable for impregnating flowers, etc., consists of a mixture of sand, transformer oil, paraffin oil, lime, para-diphenyltrichloroethane, "Lysol", formalin and perfume. Austrian patent 172,939, through *Chem. Abstracts*, vol. 47, No. 1, page 335.

New Sulfurated Anionics

Mono- and dibasic acids were transformed into the substituted amides by heating with $H_2NC_2H_4OH$ at 160° for four hours in the presence of zinc chloride. The N-hydroxyethylamide of lauric acid melts at 78°, that of oleic acid at 92°, of stearic at 96°, of palmitic at 94°, of adipic at 79-80°, and of sebacic at 141°. Also prepared were the ethanolamides of the fatty acids from coconut oil and from spermaceti. Treating the amides with chlorosulfonic acid and forming sodium salts lead to detergents. A. Spada and E. Gavioli, *Farm. sci. e tec.* (Pavia) 7,441-1 (1952), through *Chem. Abstracts*, Vol. 47, p. 894.

Neutralized Cleansers

To reduce the alkalizing action of soaps and other alkaline washing agents on the skin, it is suggested to incorporate approximately 0.5 to 1.0 gm. of acetaldehyde or other aliphatic aldehydes containing from two to five carbon atoms. Soap and other cleansers prepared in this manner do not alkalize the skin nor is any alkaline reaction produced. If an alkaline reaction is produced at first it will be shortlived. It is also suggested that propionic aldhyde or grape sugar be added to such washing agents. British patent 680913, A. Luhn & Co., Wuppertal, Germany. *S.P.C.* February 1953.

Detergents for Wool

Cleaning efficiency of detergents and washing methods in laundering soiled and unsoiled woolen fabrics, not previously treated for shrinkage control, are the subject of a study by Margaret S. Furry and Elinor M. O'Brien, U.S.D.A. Five detergents were tested for soil-removing properties and whiteness retention by washing methods in which agitation and temperatures varied. Agitation of the test samples was found to be more effective than temperature of the washing in soil removal and in whiteness retention. In general, in distilled water, the unbuilt soap and unbuilt and built synthetic detergent 1 (sodium lauryl sulfate products) removed most soil; built synthetic detergent 2 (nonionic polyglycol ester) was next; unbuilt synthetic detergent 2 (sulfated glycol ester) was least effective. *Am. Dyestuff Reporter* 41, 861-2 (1952).

"Deltyl" for Shave Creams

"Deltyl Extra", a solvent consisting of isopropyl myristate with minor amounts of isopropyl laurate and palmitate, is suggested for use in brushless shaving creams, among other things, in an article on the solvent appearing in the January issue of the *Givaudanian*, house organ of Givaudan-Delawanna, Inc., New York When used in concentrations of five to ten percent, "Deltyl" is said to exhibit a greaseless emollient action, desirable in such products as brushless shave creams.

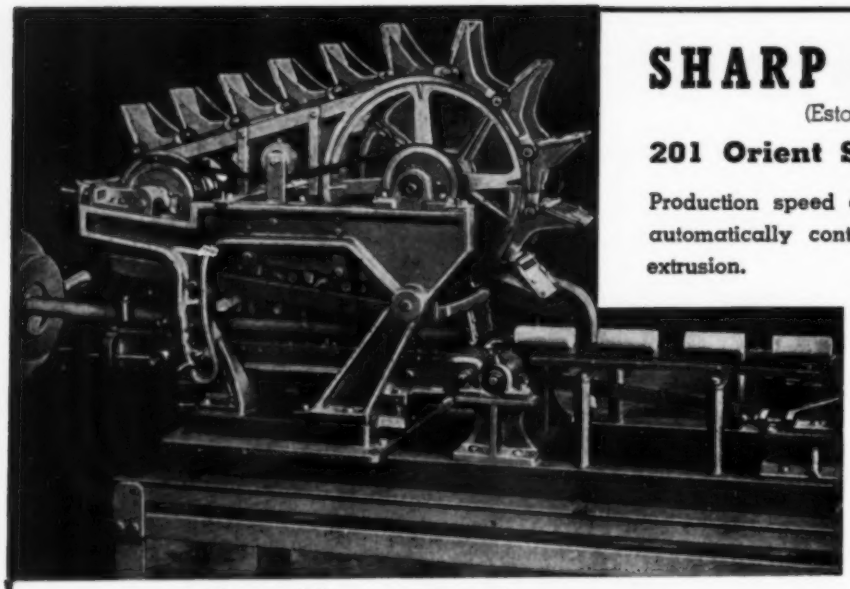
"Deltyl" has been tested for use in aerosol type shaving creams and household sprays according to the manufacturer. It is said to be compatible with the various propellents and to be suitable for use as a cosolvent to aid solubility with most aromatic materials.

Soap Stock from Rice Oil

An odorless and light-colored soap stock is said to result from the following procedure: Rice oil, 100 kilos, acid No. 90 and iodine No. 103, is saponified with 83 kilos of 18 percent caustic soda and treated with 15 kilos sodium hypochlorite solution (10 kilos of bleaching powder in 1000 kilos of water treated with 75 kilos of 20 percent soda ash) in five minutes at 80-100°. Japanese patent 2727 (1951) through *Chem. Abstracts*, vol. 47, p. 897.

Rosin Soap Conductivity

The conductivity of hydrated rosin soap in aqueous solution determined at 40° as a function of concentration indicates that the critical value for micelle formation was 0.011 M. The formation of micelles begins at a lower concentration and degree of aggregation is greater for hydrated rosin soap than for soap of tall-oil rosin or sodium abietate. Olavi Harva (Abo Akad., Finland) *Kolloid-Z.* 127, 132-4, 1952, through *Chem. Abstracts*, vol. 47, p. 334.



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NEW Patents

The information below is furnished by patent law offices of

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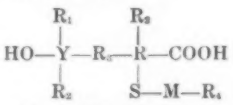
Washington 5, D. C.

The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50c for each copy desired. $1.00 for Canada. They will be pleased to give you free preliminary patent advice.

No. 2,618,607. Liquid Detergent Composition, patented by Herbert L. Sanders, Phillipsburg, N. J., assignor to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware. A liquid detergent composition is patented for use in mechanical dishwashing operations comprising from 5 to 20 parts of N-palmitoyl-N-cyclohexyl taurate, from 5 to 20 parts tetrapotassium pyrophosphate and water.

No. 2,618,645. Organic Mercurials, patented by Albert Frank Bowles, Naugatuck, Conn. The patent covers the bactericide and fungicide having the structural formula:

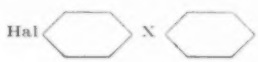


wherein Y signifies an aromatic nucleus selected from the benzene series of hydrocarbons, R signifies a ring compound which serves as a secondary nucleus and directs the specific characteristics of the resulting product and which is selected from the group consisting of aryl aromatic cycloaliphatic and heterocyclic nuclei, R_1 signifies an alkyl radical having not more than 4 carbon atoms, R_2 signifies an alkyl radical having not more than 8 carbon atoms, R_3 signifies a member selected from the group consisting of a carbon to carbon bond and alkylene and keto carbonyl radicals, M is a bivalent heavy metal atom selected from the class consisting of copper and mercury and R_4 is an alkyl group.

No. 2,622,058. Ammoniated Dentifrice, patented by Robert G. Kesel, Aurora, Ill., assignor to The University of Illinois Foundation, a nonprofit corporation of Illinois. The patent covers a dentifrice comprising a non-toxic carrier adapted for oral administration and dibasic ammonium phosphate in proportion to provide under conditions of use in the mouth a concentration in the saliva sufficient to inhibit lactobacilli and being not substantially less than 2% of the composition, and a flavor masking ingredient.

No. 2,621,368. Method of Compacting Soap into Sound Bars, patented by Donald E. Marshall, Edina, Minn., assignor to Micro Processing Equipment Inc., Des Plaines, Ill., a corporation of Illinois. A method of compacting powdered soap into bars is described which comprises: placing a measured quantity of the powdered soap in a die; subjecting the powdered soap in the die to an initial forming and shaping pressure empirically determined to form the same into a form and shape retaining compact free from cracks; subjecting the compact to a succession of intermittent applications of pressure with each pressure application slightly greater than the preceding one to thereby first seal the surface of the compact and as a result effect the entrapment of air therein; and releasing the compact of pressure between the intermittent pressure applications, said alternate applications and releases of pressure knitting the compact into a monolithic bar.

No. 2,623,838. Insecticide, patented by Harry Bender, Torrance, Calif., assignor to Stauffer Chemical Company, a corporation of California. The patent covers an acaricide consisting essentially of an active ingredient, having the formula



where Hal is a member chosen from the group consisting of chlorine and bromine and X is a member from the group consisting of S and SO and a carrier substance.

No. 2,621,355. Impregnated Cleaning Pad and Method of Impregnating Same, patented by John R. Fisher, Jr., Dayton, Ohio, assignor to International Steel Wool Corporation, Springfield, Ohio, a corporation of Ohio. The patent covers a detergent permeated fibrous cleaning pad, including a quantity of flattened particles of porous absorbent vegetable material intermixed with the detergent, the flattened particles being of irregular outline and having serrated margins to become intertangled with the fibers of the cleaning pad, thereby retarding the dispersion of the detergent material from the pad and increasing the durability thereof.

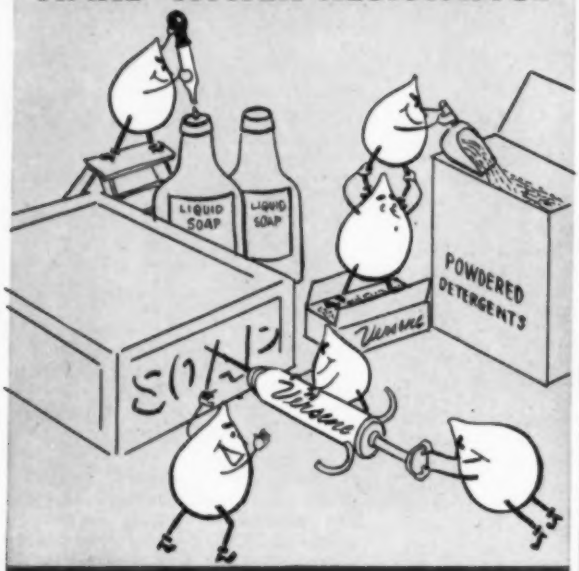
The herein described method including intermixing particles of comminuted porous absorbent material with detergent material in a liquid or semi fluid form and subjecting the intermixture to percussion treatment, by which portions of the detergent material are incorporated in the particles of intermixed porous absorbent material and the latter flattened, and thereafter impregnating a fibrous cleaning pad with the detergent intermixture, the flattened particles of which are caused to become entwined with the fibers of the cleansing pad whereby the subsequent physical separation of the detergent material from the pad will be materially retarded.

No. 2,620,511. Method and Apparatus for Cold Milling Soap and Other Materials, patented by Donald E. Marshall and John A. Harrington, Minneapolis, and Robert L. Crane, Glen Lake, Minn., assignors to Micro Processing Equipment Inc., Des Plaines, Ill., a corporation of Illinois. The method of milling deformable solid material is patented which comprises: forming the material to be milled into a film-like sheet; force feeding said sheet in one direction through a shearing and compacting zone in which the sheet is constrained to edgewise travel; imparting high speed motion to the surface layer of material at one side of the sheet as it travels through said zone crosswise of said feed direction, relative to but substantially parallel with the surface layer of material at the opposite side of the sheet; and congesting the material adjacent to said opposite side of the sheet at spaced areas thereof in the shearing and compacting zone so that the combined action of such congestion and the high speed motion of said surface layer of material effects subdividing and compacting of particles in the mass of material comprising said film.

No. 2,622,974. Herbicide patented by Arthur W. Swezey, Garden Grove, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware. The patent describes a herbicide composition comprising as active toxicants a mixture of from 1 to 5 parts by weight of monochloroacetic acid and 2 parts by weight of trichloracetic acid, said toxic materials being present in the composition as members of the class of the free acids and their water-soluble salts.

No. 2,622,975. Herbicide, patented by Percy W. Zimmerman and Albert E. Hitchcock, Yonkers, N. Y., assignors to Boyce Thompson Institute for Plant Research, Inc., Yonkers, N. Y., a corporation of New York. The plant regulant composition for killing plants is disclosed as comprising chloroacetic acid in an amount varying from 0.3% to 10% and undecylenic acid in an amount varying from 0.3% to 10%.

HOW TO "BUILD IN" HARD WATER RESISTANCE



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SOAP PLANT *Observer*

By John W. McCutcheon

LAST month we dealt briefly with continuous processes as they applied to soap manufacture. There is no question that these newer methods are changing the entire face of the industry. Equipment manufacturers should be alert to these changes and keep up with them.

A word of caution was also given to soap manufacturers attempting to streamline their production methods. They should recognize that continuous processes frequently have minimum sizes which may be far beyond their requirements. The answer to that problem is to continue batch process methods with as much instrumentation as is necessary for good economic control. In making soap by kettle procedure instrumentation might include the installation of scales for fat charging, brine tanks to supplement or replace the addition of salt in solid form, safety devices to prevent boil-over, etc.

How old fashioned soap boiling can be is not realized until one visits a factory or two where the last change in process occurred prior to 1900.

A plant we visited recently made only one line of soap in the last hundred years. It was a good line of soap that could not be surpassed in quality. It was priced right and it had customers who would seek it above all other soap products. The trouble was that each year fewer and fewer of those customers were still alive. The company was was making a class of product that had started to become obsolete a quarter of a century ago. In this factory the kettles had no means of recirculation, the soap was still hand stamped and packaged in wooden cases bound with bent wood.

In another factory, frames were moved distances of over 500 feet by hand, on narrow gauge tracks which required special inserts to be placed by hand at cross-over points of which there were three.

The moral to this is that a factory which for various reasons cannot adopt continuous methods for its processing can nevertheless be modern. A modern factory and a factory having continuous processes are not synonymous terms. The real reason most plants that have continuous processes are modern, lies in the fact that the outside engineers who are hired to install the plant, bring modern ideas with them and are able to persuade the management to put them into effect.

Returning again to continuous processes, we find that glycerine recovery by ion exchange is a process that lends itself readily to fairly small scale operation. The absence of moving parts (except pumps), little supervision and simplicity of starting-up and shutting-down makes it possible to design units economically for as low as 100 pounds of glycerine per hour which represents the splitting of approximately 1000 pounds of fat p.h.

Neutralization of fatty acids by continuous means is necessary to complete the cycle fat splitting to soap. (See U. S. patent No. 2,159,397 (1939) to Procter & Gamble.) The neutralizing system is covered by U. S. Patent 2,133,666 (1938) also to Procter & Gamble. Here the chilled fatty acid and alkali, which may contain some caustic potash, are intimately mixed and sprayed into a chamber under substantially reduced pressure. A certain fraction of water is thereby flashed off and the resultant warm pasty mass of soap is ready for chilling and aerating if desired to a continuous bar [U. S. patent No. 2,295,594 (1942)] ready for stamping and wrapping. Actually the bar comes from the mechanical heat exchanger at soft marshmallow consistency, which very soon sets up hard enough to stamp after passing it on an endless conveyor system through an air cooled chamber. See also U. S. Patents 2,377,424 (1945) and 2,403,925 (1946) to the Colgate-Palmolive-Peet Company which also describe chilling and aeration equipment.

The impression should not be gained, however, that the above patents cover all the means available for neutralizing fatty acids. The engineering firm of Marco in Wilmington has developed mixing equipment for the purpose, as has the writer. Attention should also be drawn to the "Filmill' described in the November, 1952, column. In the same vein, simple equipment in everyday use sometimes may adopted to the unusual. For example, the continuous formation of laundry bar soap, by means of a brine cooled plodder has been noted. This gives a tremendous saving in inventory and space requirements.

When we mention sulfonation, we refer specifically to the manufacture of detergents. Continuous processes for sulfonation have been developed and are in present use. Here the application of continuity is necessary to give an improved product. Batch processes have a tendency to cause local overheating with accompanying decomposition. One company (Ninol Laboratories, Inc., Chicago) are using "Sulphan," stabilized sulfuric anhydride, for continuous sulfonation in order to obtain yields of a comparatively salt free product. Equipment for sulfonation and neutralization may be designed economically for fairly small rates of production which make them attractive to the smaller manufacturer.

For the continuous drying of soap, the flake and spray dryer are standard in most factories and need

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little comment here. The flake drier is eminently suited for flakes, industrial ground powders and toilet soap base. The spray drier is useful for pure or built soap beads, light and heavy duty synthetic detergents and for preparing toilet base. Both types of equipment have an economical minimum level of about 1000 pounds of dried product per hour and on that basis, the spray tower will cost about three times the flake drier. As production rates increase, however, the capital expenditure per pound of product becomes closer. Tower capacity may be multiplied many times by increases in tower height and diameter. Large increases in flake capacity on the other hand are usually obtained by multiple installations.

* * *

We mentioned the synthesis of linoleic acid and oleic acid last month. A few questions of reference arose regarding this. Here are the data—

Oleic; *J. Am. Chem. Soc.* V56, 1563-5 (1934) by C. R. Noller and R. A. Bannerot.

Linoleic; *J. Am. Chem. Soc.* V73, 2590 (1951) by H. M. Walborsky, R. H. Davis and D. R. Howton.

I said *recent issue*, last month. My how time flies!

* * *

THE Soap Convention is over for another year without bringing into focus any momentous change in the industry. Syndets are still gaining ground, not as fast as some would predict and not as slow as some soapers would like. Tallow is having its troubles and probably henceforth will be an export item. Its use in syndets is gaining momentum. Both the above were predicted at the convention two years ago! The American public is getting cleaner and cleaner. We now use about 25 pounds of soap per person annually. In Italy annual per capita consumption is about 10 pounds and in Norway 20, according to soapers from those countries. One friend seen regularly at these conventions, gave the writer some food for thought. He said the worst mess a soaper could get into these days with the housewife, was to inadvertently get some soap mixed into her detergent!

New Potdevin Labeler

Potdevin Machine Co., Teterboro, N. J. recently announced a new labeling machine which applies 32 slip

New Potdevin Labeler

labels per minute to collapsible tubes. The machine automatically forms the label and ejects the label directly on the collapsible tube. The adhesive used is a resin hot melt kept at the correct temperature by a thermostatically controlled glue pot. The glue tank does not have to be cleaned every day. The labels are snugly applied to the tubes and can be slipped off when necessary, according to the company. Machines are made for ⅛, ¼, ½ and one ounce tube sizes. Completely self-contained except for vacuum pump line for label pick-up. Hopper holds 500 labels. The labeler measures 17½" x 15" x 9½", and has a stainless steel cover.

At the same time, the manufacturers announced a new Potdevin ductor-roller margin gluer, called Type MGA; a smooth running ductor-roller type coating machine; and the Potdevin activator for thermoplastic labels. The latter machine is used for plastic, metal, fabric, glass packages, and other containers to whose surface it is difficult to adhere labels.

Skid Resistance Bag

Union Bag and Paper Corp., New York recently announced the development of a new "Multiwall" bag for which the company claims non-skid properties. A special coating is applied to the face and back of bags during manufacture which gives them high skid resistance, according to the maker. The new non-skid bag is claimed to give more protection, because it curtails breakage due to bags falling from fork trucks and stacks. The amount of special coating applied to bags is controllable, thus permitting any non-skid characteristic to be built in.

Activated Carbon Folder

A new six-page folder, addressed to users of charged soap dry-cleaning systems, recently was released by Atlas Powder Co., Wilmington, Del. The folder explains how to use activated carbon in such systems, and enumerates the benefits so achieved. These suggestions touch on removal of fatty acids and objectionable odors, both with minimal retention of soap. Additional information refers to quantities of activated carbon which should be added, and recommended stages in the cleaning cycle at which to add them.

Metallic Sodium Booklet

A booklet on high-surface sodium (HSS), another new form of metallic sodium developed by the research staff of National Distillers Chemical Co., has recently been released by its subsidiary, U. S. Industrial Chemical Co., New York. The term HSS is applied to films of sodium approaching colloidal dimensions, spread over inert solids of high-surface area.

The 20-page booklet is a working manual and guide to procedure for those interested in developing specific formulations for specific usage. Copies of the booklet are available on request from any of the U.S.I. branch offices.

New Soap Stream Divider

A soap stream divider, used as an adjunct to its "C 9" continuous cutter, was recently developed by Henry Simon, Ltd. of Stockport, England. The company claims that the new divider exploits the high output capacity of the cutter by allowing two lines of soap cakes instead of one to be fed for dual stamping. The design of the soap stream divider, the company says, combines efficiency with simplicity consisting of two components only: a variable speed conveyor and a deflector pivoted at the centre.

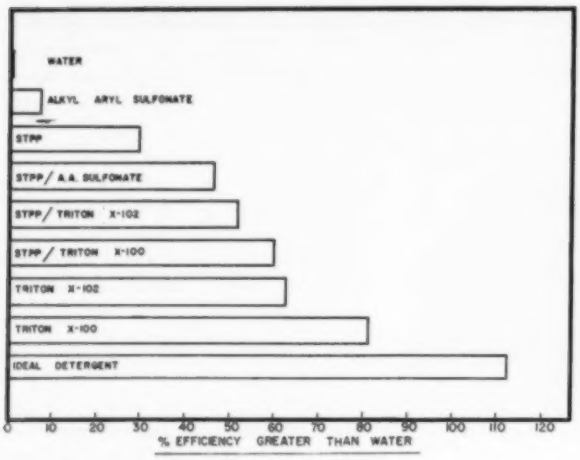

Figure 22. Comparison of detergents in terms of percentage efficiencies greater than that of water

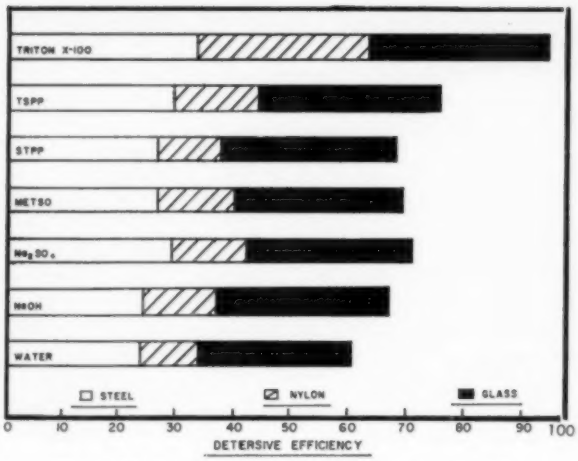

Figure 23. Detersive efficiencies of alkaline materials

Nonionics . . .

(From Page 53)

Conclusions

THIS work has shown that—by theory and by test—the nonionic surfactants, as a class, are the most efficient detergents for cleaning all kinds of surfaces. Their low cost and high efficiency when blended with alkaline salts makes them economically feasible for use by the practical formulator and presages a bright future for them in the sanitary chemical field.

Acknowledgments

The author wishes to express his sincere appreciation for the many valuable comments and suggestions of Albert C. Nuessle in whose laboratory this work was performed; and for the assistance of Miss Phyllis J. Kline in obtaining the data reported here.

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(4) G. J. Kahan, *J. Colloid Sci.* 6 (6) 571-75, Dec. 1951.

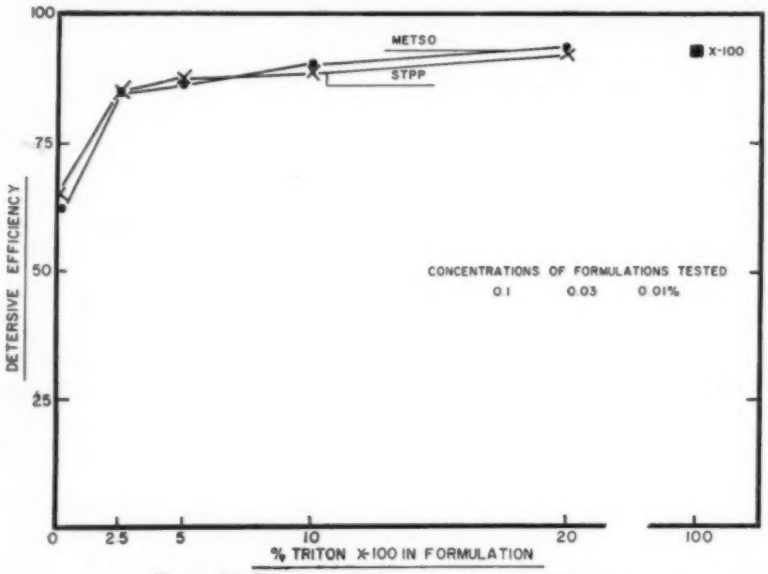

Figure 24. Detersive efficiencies of built formulations

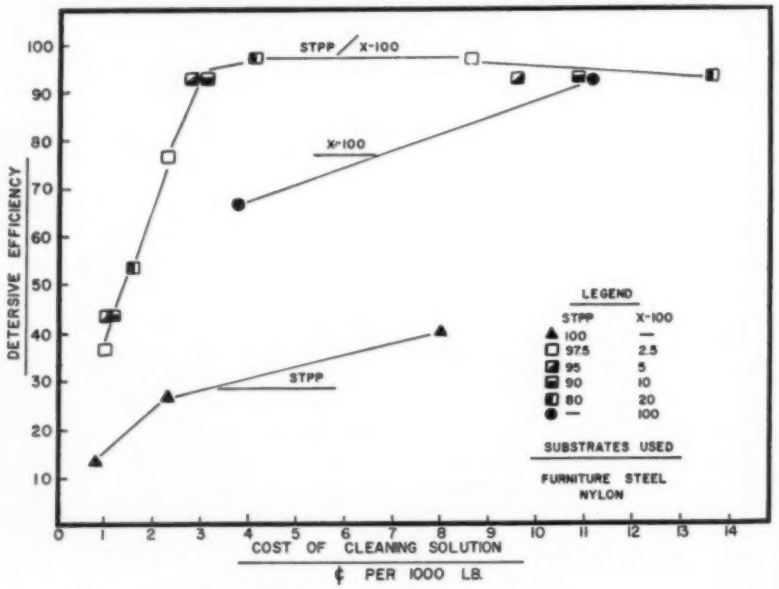

Figure 25. Detersive Efficiency per unit Cost

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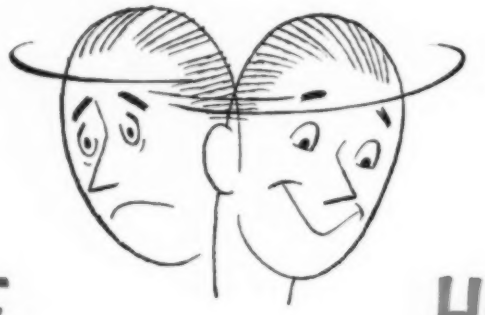

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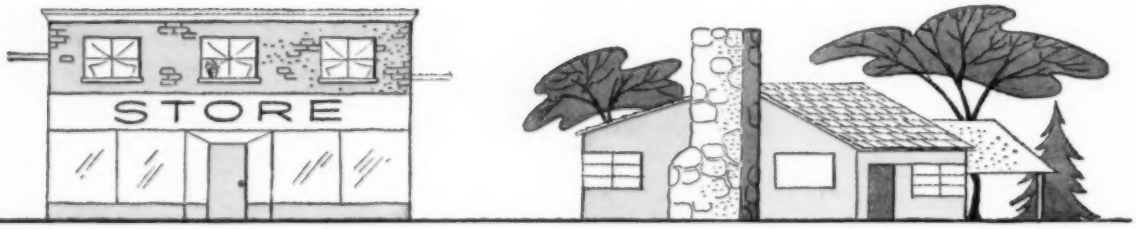

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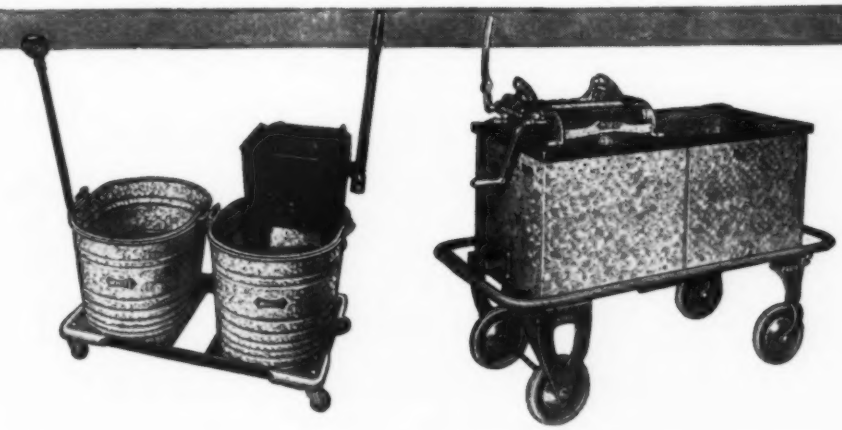

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3 OUT OF 4 DEALERS NOW

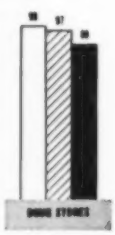
Substantial Gain Over Previous Year's Report

For the sixth consecutive year (according to the latest Du Pont survey of the market), there has been a substantial increase in the number of retail dealers stocking pressure-packed aerosol products. Today . . . 3 out of every 4 retailers interviewed carry one or more aerosols in stock!

The survey . . . conducted in July 1952 . . . was more extensive than earlier studies. It presents opinions and reactions obtained by interviewers in a total of 2,233 retail outlets in 60 cities throughout the United States. Interviews took place in stores of six major classifications of trade: department stores, drug, hardware, food, variety or 5 & 10¢ stores, and automobile supply stores and service stations.

STORE SIZE CONSIDERED

An innovation of the survey is the tabulation of results by store size: large, medium and small. This permits an even closer analysis of retail outlets. It compares percentage of various types of aerosol products stocked in stores of the three sizes. Differences are important. For example: 89% of large grocery stores stock aerosols, whereas only 45% of the small grocery stores reported that they carry aerosols in stock. However, as the chart above shows, there appears to be good distribution of aerosol products in drug stores regardless of store size.



REASON FOR STOCKING AEROSOLS

To determine why dealers stock aerosols, interviewers asked them for their opinion of the aerosol method of dispensing compared with other methods. In hardware stores, 81% informed interviewers that they believe aerosols are better. In both department and drug stores, 75% gave a similar reply. Asked why they considered aerosols better, dealers listed the following eight main reasons:

Easier to use	42%
More convenient	25%
Not greasy or messy	18%
Works well, effective, better	11%
Faster to use	11%
Better control	8%
No waste	6%
More economical	5%

TREND TOWARD AEROSOL PACKAGING CONTINUES

The study shows that there has been a consistent increase in the kinds and types of aerosol products carried in stock by retailers. Although insecticidal aerosols still lead the parade in all classifications of trade, many other pressure-packed products have appeared on the market and are steadily gaining in distribution. To illustrate, the chart below shows the pattern for room deodorants in the six categories studied:

% OF DEALERS WHO STOCK AEROSOL ROOM DEODORANTS

Dept. Stores			Drug Stores			Grocery Stores			Hardware Stores			Variety			Auto Supply		
L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
68	46	*	87	77	86	53	49	37	51	46	43	37	48	34	8	6	10

*Only 1 small department store stocked aerosols, so no data is shown because sample is too small. L=Large M=Medium S=Small.

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. . . THROUGH CHEMISTRY

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STOCK AEROSOL PRODUCTS

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Just as wartime insecticidal aerosols were propelled by a "Freon" propellent . . . so also are the vast majority of aerosol products on the market today. There is good reason why.

"Freon" propellents are of the finest quality obtainable. They are scientifically made by intricate, laboratory-controlled methods of manufacture. Care and precision are production essentials that insure the degree of purity and uniformity for which these propellents are known. "Freon" propellents are safe . . . nonflammable, nonexplosive, virtually nontoxic, and their extreme dryness (maximum moisture content: 15 ppm for "Freon-12"—"Freon-11" solutions) further insures the satisfactory performance of modern, pressure-packed containers.

FREE DIGEST OF THE STUDY

Because the survey is of timely interest and value to manufacturers of a wide variety of products, highlights have been published in a 20-page digest entitled: "The Aerosol Market." Tabulations of the nationwide findings can serve as a guide in considering and evaluating this rapidly expanding market. If you would like a copy of the digest, please request it on your company letterhead.

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Various formulations of "Freon" propellents have been designed to meet the specific requirements of different types of ingredients used in space sprays, residual sprays and foam products. To help formulate a "Freon" propellent suitable for dispensing your product by the aerosol method, technical advice and assistance is gladly offered upon request. By working closely with your chemists and physicists, a correct, economical and effective propellent formula can readily be designed to meet your specific needs. Address: E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.

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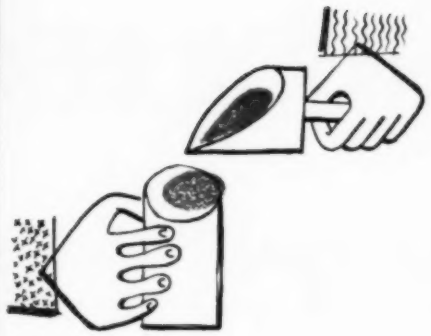

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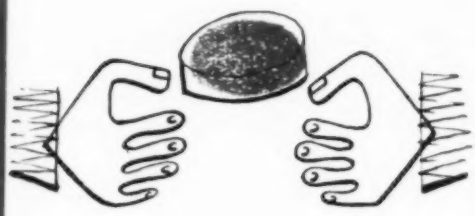

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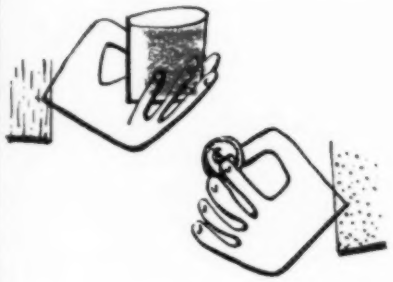

It takes little or no processing for you to put Monsanto SANTOCHLOR (para-Dichlorobenzene) on the market . . . whether you sell it as a deodorant, for moth and larvae control, mildew control, or for checking peach-tree borers.

SANTOCHLOR is available in five standard crystal sizes: No. 34, approximately rice-size granules, for shaker-top cans and for blocking; No. 0, approximately ¼-inch pellets, for shaker-top cans; No. 1, approximately ½-inch pellets, for packaging; Blocking Mix, a mixture of sizes under 7-mesh; Fines, a mixture of sizes less than 16-mesh.

Why not call the nearest Monsanto sales office and place your order today?

Santochlor: Reg. U. S. Pat. Off.

SEND for this technical bulletin on Santochlor, its properties and uses. Write: MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 800 North Twelfth Blvd., St. Louis 1, Mo.

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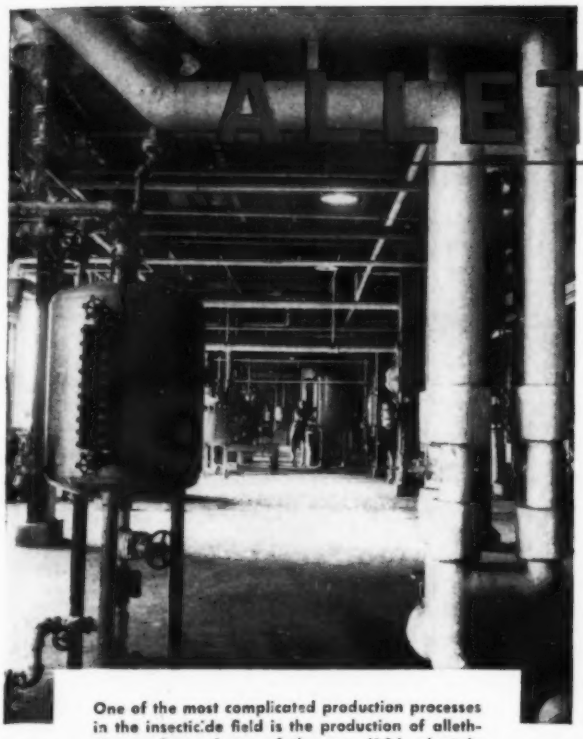
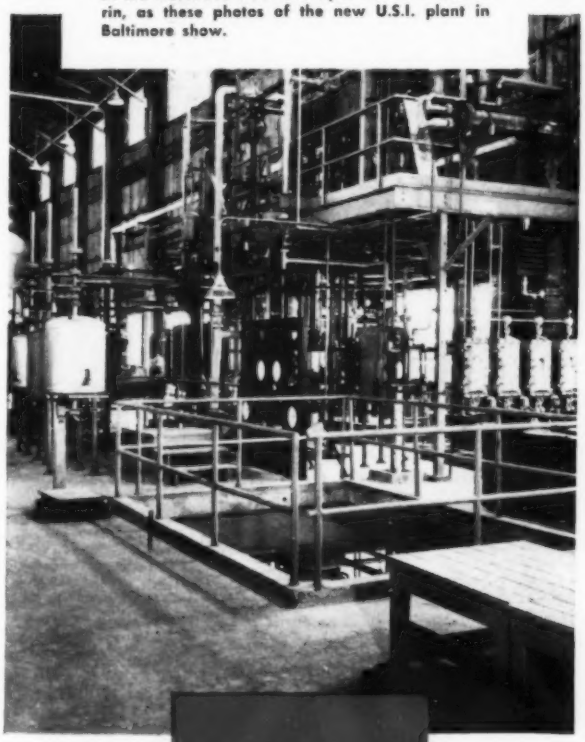


One of the most complicated production processes in the insecticide field is the production of allethrin, as these photos of the new U.S.I. plant in Baltimore show.



ALLETHRIN

joins the BIG LEAGUES of insecticides

New U.S.I. Plant Increases Supply for Industry Throughout the World

Large-scale production of allethrin from the new U.S.I. plant at Baltimore signals the arrival of allethrin in the major leagues of the insecticide industry. After serving an apprenticeship of several years in small scale production, allethrin can now assume its rightful place in insecticide formulations. Allethrin is a synthetically-produced chemical similar to pyrethrins.

As a supplement to pyrethrins, allethrin is a "natural" for the U.S.I. line of insecticides because U.S.I. has had long experience in the development and formulation of low toxicity insecticide chemicals. However, allethrin is not a substitute for pyrethrins, because their action and effectiveness differs according to the insects involved, method of application, synergist used and other factors.

Allethrin has found its greatest immediate usefulness in household aerosols and sprays designed primarily for the control of flies. As a result, U.S.I. Research has developed and tested various combinations of allethrin and/or pyrethrins with piperonyl butoxide as a synergist and has approved formulas and complete formulations available for the industry. In addition, the individual chemicals, or combinations of allethrin, pyrethrins and piperonyl butoxide are available. Combinations of pyrethrins and piperonyl butoxide are known by the U.S.I. trade name Pyrenone*, and the name Pyrenone appears on the label of many leading insecticide brands.

Other uses of allethrin for which the potential is now being explored indicate it will be of value to the entire pest control field, not only in America but throughout the world. U.S.I. has established worldwide leadership on low toxic insecticide chemicals.

Now, with the increased supply of allethrin, U.S.I. is able to offer the pest control industry still greater flexibility, effectiveness and economy in insecticides.

*Reg. U. S. Pat. Off.

For information on allethrin, Pyrenone, pyrethrins, piperonyl butoxide or other low-toxic insecticides, call or write the U.S.I. office nearest you.

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Petrolite Crown 36 was developed for polish manufacturers who wished to incorporate in their emulsion a very hard, high melting point, inert wax such as CROWN 1035 (non-oxidized). Crown 36 yields a high-quality, resin-free emulsion polish formulation, at a very advantageous manufacturing cost. Emulsion polishes incorporating Crown 36 have a lustrous sheen which can be improved by buffing.

SPECIFICATIONS

Crown Wax	MPoF	Pen	Color NPA	Acid No.	Sap. No.
15	180 min.	4-6	4-5	14-16	50-60
23	180 min.	4-6	4-5	20-25	55-65
36	180 min.	5-7	5-6	30-35	75-85

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*This product has been thoroughly tested and accepted for use by the United States Military Forces.

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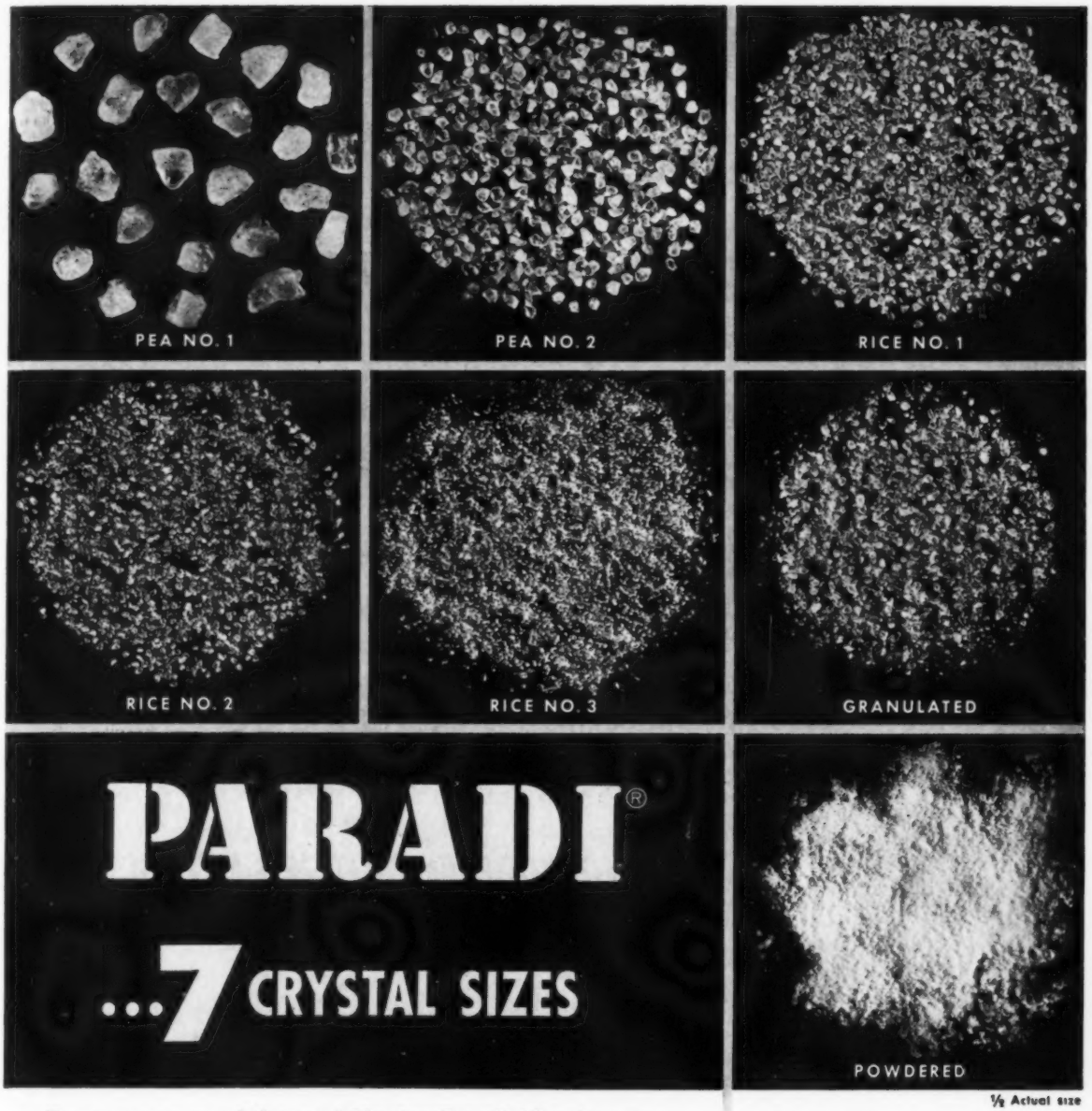

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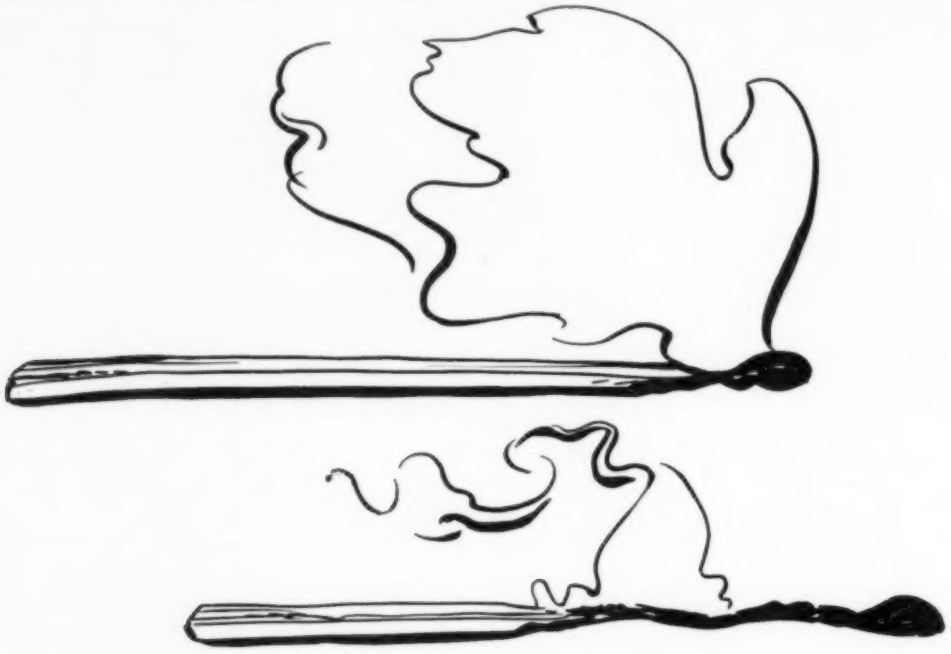
RESINS MEMO: To Manufacturers of Emulsion Waxes



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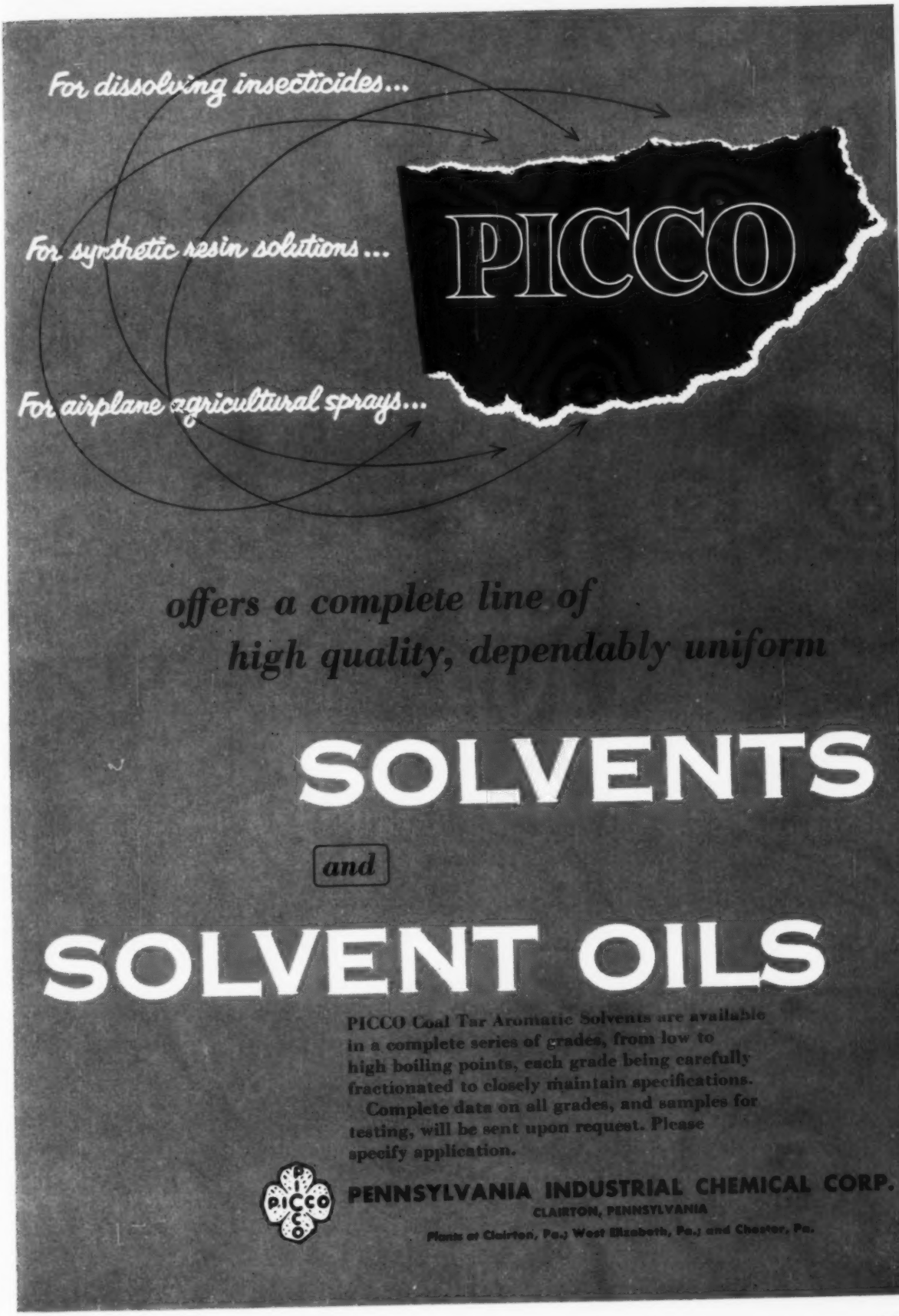
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HOLBROOK, MASSACHUSETTS

N.S.S.A. Meets March 22-25

30th annual convention and trade show set for Conrad Hilton Hotel, Chicago

INDUSTRY problems, such as the training of salesmen, profitable warehousing and label standardization are among the topics to be discussed at the 30th annual convention and trade show of the National Sanitary Supply Association. The meeting is being held Sunday through Wednesday, March 22-25 at the Conrad Hilton Hotel, Chicago.

Association business, including the election of officers and directors for the coming year, and possible changes in the constitution and by-laws of N.S.S.A. are slated to be taken up at discussion sessions held following luncheon on March 23 and 24.

The trade show in the hotel's Exhibition Hall is expected to be the largest from the standpoint of the number of exhibitors in the history of the association. Preconvention lists show more than 130 exhibitors of various sanitary chemicals, dispensing and application and cleaning equipment. Many new products and merchandising ideas are expected to be revealed for the first time to the sanitary supply jobbers attending the show, according to Leo J. Kelly, N.S.S.A. executive secretary.

Registration for the meeting takes place all day Sunday, March 22. On this day, too, the exhibit hall opens at 10:00 a.m. and remains open until 7:00 p.m. The hall opens at 9:00 a.m. the following morning, with a 12 noon closing prior to the group luncheon in the Boulevard Room and the official opening of the convention immediately following lunch. Martin J. Peters of Moore Brothers Co., New York, National Sanitary Supply Association president presides at the meeting, at which time he also gives his address of welcome as president. Other officers giving reports are national vice-president David Ginsburg of Scientific Supply Co., Denver; Leo J. Kelly, executive vice-president; Arthur P. Boller of S. C. Lawlor Co., Chicago, treasurer, and Philip Shore, of Shore Metal Products Co., Los Angeles, secretary of the board.

Regional vice-president and directors are introduced at this session and the nominating committee is appointed.

W. S. Jessup, president of U. S. Sanitary Specialties Corp., Chicago, gives the final talk, "George Can't Do It", and a Borden & Busse film presentation, "Closing the Sale", is the final feature before consideration for adoption of the amended constitution and by-laws of the N.S.S.A. Following this the meeting recesses until noon the following day. The exhibition hall reopens and remains open until 9:00 p.m.

The convention meeting reconvenes in the Boulevard Room at 12:30 p.m., Tuesday, March 24. The exhibit hall is open that morning from 9:00 a.m. until 12 noon, when the final closing for the day takes place.

Mr. Peters presides at the Tuesday afternoon session, which opens with the report of the nominating committee and the election of officers and directors. Following this a panel discussion, "How We Train Our Salesmen" takes place. Participating are Philip G. Kaye of Buffalo Kay Chemical Co., Buffalo, N. Y.; E. F. Robinson of Robinson Janitor Supply Co., Oklahoma City, Okla.; James Rieder, The George T. Johnson Co., Medford, Mass., and Harley F. Peatee, Mellocraft Co., Toledo.

The next feature is a discussion entitled "Warehousing for Profit" by Noel S. O'Reilly, manager of operations, Lien Chemical Co., Franklin Park, Ill.

"Investment Protection" is discussed by William A. Thurow, business consultant of Chicago, and the final talk deals with "Standardization of Labels" by L. W. Shoepp, of L. W. Shoepp Co., Chicago. Adjournment takes place following this talk, and the banquet and floor show at 7:00

Martin J. Peters, Pres.

David Ginsburg, V. P.

Leo J. Kelly, Exec. V. P.

Arthur P. Boller, Treas.

George Flanagan, Central V. P.

C. R. M. Sheppard, South V. P.

H. J. L. Baum, West V. P.

p.m. concludes the day's events.

The exhibit hall is open from 9:00 a.m. to 1:00 p.m. Wednesday, March 25, final day of the meeting.

Convention committees for the 30th annual N.S.S.A. meeting include: Program Committee, Ludwig Wilson, Ludwig Wilson Co., Chicago; Herman Krankel, Krano Co., Chicago; Carl B. Lien, Lien Chemical Co., Franklin Park, Ill. and Norman Rothfield, Ramrod Chemical Co., Chicago;

Registration Committee, Arthur P. Boller, S. C. Lawlor Co., Chicago; Albert E. Miller, Orbis Products Co., Chicago; W. A. Boettcher, W. A. Boettcher Co., Chicago, and Sam Zagel, Compco, Inc., Chicago;

Exhibition Committee, Sam Brody, Atlas Products Co., Chicago; K. W. Zimmer, Kleenette Mfg. Co., Chicago; Robert Lockhart, Candy & Co., Chicago, and John Backlund, United Floor Machine Co., Chicago.

Program for 30th Annual N. S. S. A. Meeting

SUNDAY, March 22, 1953

Registration 9 A.M. to 5 P.M.
Exhibition Hall opens 10 A.M. to 7 P.M.

MONDAY, March 23, 1953

Registration 8 A.M. to 7 P.M.
Exhibition Hall opens 9 A.M. to 12 Noon
(Exhibition Hall closed during business meeting—12 Noon to 4:30 P.M.
Exhibition Hall reopens immediately after business meeting recesses and will remain open until 9 P.M. Monday evening)

12:30 P.M. Luncheon, Boulevard Room
1:45 P.M. First convention meeting convened, Boulevard Room, National President, Martin J. Peters, Presiding
1:50 P.M. Invocation
1:55 P.M. Address of welcome, President Martin J. Peters
2:05 P.M. Report of Executive Vice-President, Leo J. Kelly
2:35 P.M. Address of National Vice-President, David Ginsburg
2:45 P.M. Report of Treasurer, Arthur P. Boller
3:00 P.M. Report of Secretary of Board of Directors, Philip Shore
3:10 P.M. Introduction of Regional Vice-Presidents and Directors
3:20 P.M. Appointment of Nominating Committee
3:25 P.M. "George Can't Do It," by W. S. Jessup, President, U. S. Sanitary Specialties Corp., Chicago, Ill.
3:55 P.M. "Closing the Sale," a Borden & Busse film Presentation
4:15 P.M. Consideration for adoption of amended Constitution and By-Laws
4:45 P.M. Recess to Tuesday Luncheon, March 23, 1953, 12:30 P.M., Boulevard Room

TUESDAY, March 24, 1953

Exhibition Hall open 9 A.M. to 12 Noon
(Exhibition hall closed during business meeting and balance of this day. Banquet at 7 P.M.)

TUESDAY, March 24, 1953

12:30 P.M. Luncheon, Boulevard Room
1:45 P.M. Convention meeting re-convenes, President Martin J. Peters, Presiding
Report of nominating committee
Election of officers, directors and regional vice-presidents
2:00 P.M. "How We Train Our Salesmen," a panel presentation by Philip G. Kaye, Buffalo Kay Chemical Co., Inc., Buffalo, N. Y., E. F. Robinson, Robinson Janitor Supply Co., Oklahoma City, Okla., James Rieder, The George T. Johnson Co., Medford, Mass., Harley G. Peatee, Mellocraft Co., Toledo, Ohio
3:00 P.M. "Warehousing For Profit," by Noel S. O'Reilly, manager of operations, Lien Chemical Co., Franklin Park, Ill.
3:40 P.M. "Investment Protection," by Wm. A. Thurow, business consultant, Chicago, Ill.
4:10 P.M. "Standardization of Labels," by L. W. "Bud" Shoepp, L. W. Shoepp Co., Chicago, Ill.
4:30 P.M. Adjourn to prepare for banquet
7:00 P.M. Annual Banquet and Super Floor Show, Grand Ballroom, Conrad Hilton Hotel.

WEDNESDAY, March 25, 1953

Exhibition Hall open 9 A.M. to 1 P.M.
There will not be a general meeting Wednesday. Members are urged to complete their business with all exhibitors as final closing of all exhibits will take place at 1 P.M.

T. W. Smith, S. W. V. P.

Samuel Newman, East V. P.

Harold J. Pond, Director

List of N.S.S.A. Exhibitors

Firm Name	Booth Number
Advance Floor Machine Co., Minneapolis	128-129
Airkem, Inc., New York	173
Allied Block Chemicals Co., Pittsburgh	10
American Brush Corp., Chicago	39
American Dispenser Co., New York	86
American Sponge & Chamois Co., New York	141
American Standard Mfg. Co., Chicago	57
American Textile Products Co., Cleveland	135
Arcade Industries, Inc., Chicago	47
Armour & Co., Chicago	29
S. M. Arnold, Inc., St. Louis	51
Atlantic Stamping Co., Rochester, N. Y.	78
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Candy & Co., Chicago	110-111
Chase Products Co., Maywood, Ill.	33
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Colgate-Palmolive-Peet Co., Jersey City, N. J.	137
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Dash Metal Products Co., Brooklyn	73
Davies Young Soap Co., Dayton	149-150
Doyle Vacuum Cleaner Co., Grand Rapids, Mich.	70-71-72
Dreuding Brothers Co., Philadelphia	22
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Franklin Research Co., Philadelphia	126-127
Fuld Bros., Baltimore	42-43
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General Floorcraft, Inc., New York	77
Glasspray, Inc., Cincinnati	Section of 136
Golden Star Polish Mfg. Co., Kansas City, Mo.	45
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Sanitary Supply Showroom

"Demonstrailer," recently put into use by Baer Paper Co., serves its customers in Baltimore, Washington, D. C. and York, Pa. It is a 35-foot mobile showroom, fully equipped to do a complete on-the-job demonstration of hundreds of sanitation products.

LONG believing that selling of sanitary supplies to large consumers, particularly industrial plants, was hampered by inability to show a complete line, Baer Paper Co., Smallwood and Franklin Sts., Baltimore, recently launched a 35-foot mobile showroom. Called a "Demonstrailer", the new unit is fully equipped with samples of sanitation and maintenance chemical products, dispensers, fixtures, paper products and mechanical equipment. It consists of a 35-foot trailer and six-cylinder Chevrolet panel truck. Not only can a complete line of products be shown to buyers right at their plants, offices or institutions, but the products can actually be demonstrated right in the mobile showroom.

"Our idea for the 'Demonstrailer' ", Alan R. Rosenstock, vice-president of Baer Paper Co., told *Soap & Sanitary Chemicals*, "originated when we realized the main difficulty (of the conventional approach of salesmen calling on buyers at their places of business) is that salesmen . . . could not show or present more than a few items on a call as time would not permit (more than this). Although we have what we think is a very fine catalog, book selling is very unromantic. We felt that if we could animate our catalog we could sell more merchandise, and our 'Demonstrailer' has become the animation of our catalog."

In reply to a question by *Soap & Sanitary Chemicals* as to what has been the effect on Baer's sales of sanitary supplies using the "Demonstrailer", Mr. Rosenstock gave this answer: "We have been successful so far with our 'Demonstrailer' in definitely upgrading our merchandise by selling our customers better materials, in selling more equipment such as floor machines and vacuum cleaners and showing the customers' employees how to use our materials and equipment."

A sort of streamlined wagon selling approach, the "Demonstrailer" certainly is a novel method of merchandising and selling sanitary supplies and equipment. Because it is novel, certain advantages immediately accrue to any firm in the vanguard of the use of the trailer approach. The cost of acquiring and operating this "showroom on wheels" is of paramount interest to every jobber or distributor of sanitary supplies. Apart from the cost of the trailer itself, which is understood to be around $10,000, Mr. Rosenstock admits "The overhead on our 'Demonstrailer' is admittedly higher than our regular sales overhead. We average four calls per day and it requires the use of our regular salesmen and, in addition, a man who drives the unit and assists

Merchandise section of the Baer "Demonstrailer" where sanitary chemicals, paper products and janitor supplies are displayed and demonstrated. This trailer has samples of seven different flooring materials installed to help demonstrate various cleaning, waxing and sealing techniques. The floors or coverings employed for demonstration purposes are hardwood, ceramic tile, linoleum, rubber tile, asphalt tile and broadloom carpet.

on Wheels

in the selling of merchandise. The calls are all pre-planned as our salesmen make arrangements with prospective customers at least a week in advance. This is followed by a brochure from our office to the customer."

Under the heading of sales overhead might be added the fact, which Mr. Rosenstock points out, that "it requires much more sales training for a man to sell from the 'Demonstrailer', as he must be able to close the sale faster than the normal factory supply salesman."

Salesmen showing more items probably must know more about more of the merchandise they are selling than in the conventional sales approach wherein they sit down with a catalog in selling the buyer in his own plant.

How do the customers react to the novel sales approach of the "Demonstrailer", which is completely air-conditioned and contains a lounge, refrigerator, galley and hot and cold running water?

"The reaction of our customers has been most gratifying as they feel that it is a progressive step in merchandising factory supplies and paper products and, of course, there is quite a bit of novelty to the rig. Our 'Demonstrailer' has been operating since early in 1953 and at this writing is completely booked by our salesmen throughout April on definitely scheduled appointments. As stated above, we are very gratified by the results attained and are seriously contemplating the addition of more 'Demonstrailers', as we progress."

One of the interesting features is the floor of the trailer, which is covered with seven different types of flooring materials. This enables the salesmen to demonstrate performance of various types of cleaners, waxes, sealers and floor machines. The floorings are hardwood, ceramic tile, cork, linoleum, rubber tile, asphalt tile and broadloom carpet, as is shown in accompanying photograph.

The "Demonstrailer", which was constructed by Custom Coach Co. of Baltimore, also carries a series of testing devices for use in connection with many of the products shown.

Pôwer is supplied to the trailer by a 5000 watt generator, carried in the truck. Bottled gas is used for heating, and the unit comfortably sleeps two.

The trailer may also be set up as a classroom to aid in the instructing of the most recent methods of building sanitation and maintenance for employees of plants concerned with this work. For teaching, the trailer is equipped with a movie projector, black-board and folding chairs to seat 20.

The "Demonstrailer" is being employed to call on Baer customers in Maryland, upper Virginia, the District of Columbia and the eastern part of Pennsylvania. Baer has 23 salesmen who cover those states.

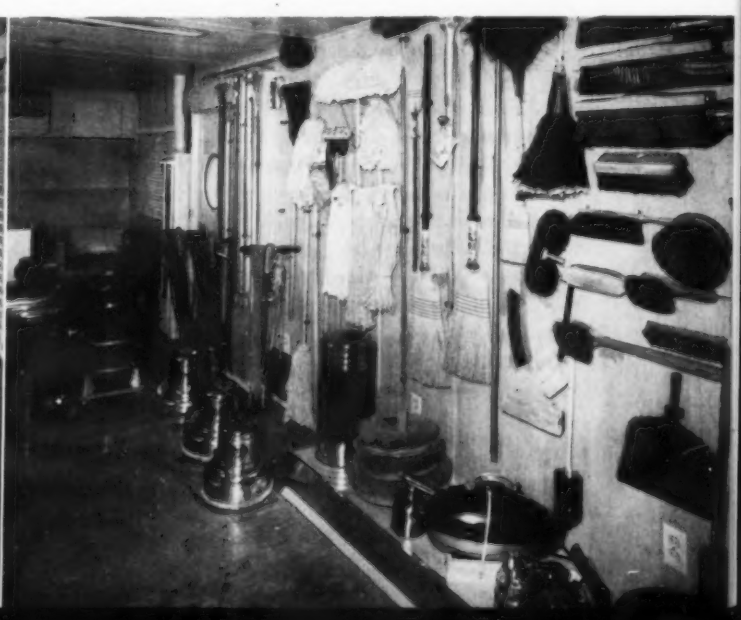
Baer Paper Co. started in business about 13 years ago, primarily as a paper supply house. Later the firm expanded into the sanitary supply field, growing in volume to the point where its sales in 1953 should be around $2,500,000. Of this total, sales of sanitary chemicals are approximately 45 percent.

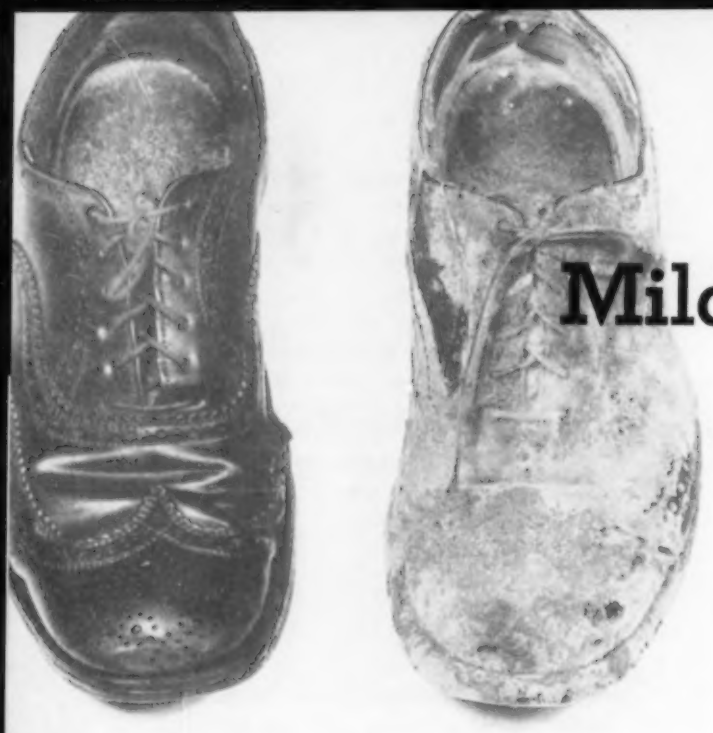
Officers of Baer Paper Co., which merchandises its private brand materials under the "Panda Brand" label, include: Irvin C. Baer, president; Alan R. Rosenstock, vice-president; Sylvan Adler, treasurer, and Frank B. Levi, secretary. Baer has associate companies with offices and warehouses in York, Penna. and Washington, D. C.

The company's sales approach differs from most sanitary supply jobbers in that Baer promotes nationally advertised items primarily. The firm is the exclusive distributor in the areas it covers for such companies as S. C. Johnson & Son, Inc., Racine, Wis.; Piatt & Smillie Chemicals, Inc., St. Louis; Virginia-Carolina Chemical Corp., Richmond; G. H. Packwood Mfg. Co., St. Louis; Bay West Paper Co., Green Bay, Wis.; Fort Howard, Green Bay, Wis., and many others. In addition, Baer carries private label merchandise on many small items, but directs most of its efforts to its nationally advertised materials.

Office and lounge section of Baer Paper Company's "Demonstrailer." Unit is equipped with hot and cold water, air-conditioning, galley, refrigerator, etc.

Maintenance machines and supplies are featured in section of the Baer "Demonstrailer." Customers' crews are instructed in proper use of equipment in classes set up by Baer representatives.





Shoes from test jar containing paradichlorobenzene (left) and control jar (right) at conclusion of test—after 16 weeks incubation at 27 degrees C.

Mildew Control....

By R. S. Shumard, Organic Chemicals

EVER since its value as an insecticide and deodorant was revealed by Dr. R. C. Roark of the U. S. Department of Agriculture something over thirty years ago, paradichlorobenzene has found wide applications as such both in the home and in industry. About thirty-five to forty million pounds of "para" are used annually in the United States for these purposes. Specifically, its largest uses have been for protection against moth damage to woolens, furniture, rugs, furs, and the like, and as a lavatory deodorant in the form of three- or four-ounce urinal cakes and in larger blocks for use in toilet wall fixtures. This market has taken about 90 per cent of the output. The balance has gone for insecticidal use against the peach tree and other borers, and as a chemical intermediate.

A search for further uses for paradichlorobenzene has indicated that it has possibilities in another field, specifically as an aid in preventing mildew damage. The partners in crime to the clothes moth and carpet beetle in damaging stored products are the aerial fungi which sprout into destructive and discoloring mildew. These damage leather, paper, wool, cotton and even plastics. Under warm, humid conditions, they thrive at their best, but they, too, can live and grow at low temperatures as witness a forgotten dish of food in a refrigerator which can be turned into bearded garbage. Likewise, even in the case of materials in storage in a cool warehouse, heavy mildew damage can take place. In addition, fungus spores are highly resistant to drying and exposure to light.

Over the years, it had been noted casually that where para was used for moth prevention under certain conditions, mildew damage seemed to be reduced. Where the concentration of para vapor was heavy in closed areas, the development of the fungi appeared to be wholly prevented. In some store rooms where furs and leather were stored at low temperatures, some development of mildew was noted upon occasion, but none when the atmosphere was charged with a good concentration of para vapor.

Several outside laboratories, (including published information by Forest Products Laboratories, as well as unpublished data from the Quartermaster Laboratories) have reported vapors of paradichlorobenzene to possess strong fungistatic activity.

Obviously if moth protection and mildew damage prevention could be accomplished in one and the same operation with a single product, it would be a boon to innumerable industries in the storage of their products, as well as to the armed services with their storage problems for millions of uniforms, blankets, tents, leather equipment, and the like. So, several years ago, Monsanto Chemical Company began its investigation of para in mildew control.

Mildew Control Tests

ESSENTIALLY, it was found that the same conditions which governed the use of para for moth control applied also for mildew control. Some of the tests used are outlined and the results noted.

Cottons, leather, woolens, paper and other products susceptible to mildew attack when held in warm humid conditions may be protected against mildew growth by storage in closed lockers, compartments, or packages in an atmosphere saturated with paradichlorobenzene. This is identical to the manner used to prevent moth attack on woolens. The prime essential is that a uniform saturated atmosphere be maintained. This may be accomplished by uniformly sprinkling the stored items as they are packed away or in the case of closets, suspending the paradichlorobenzene crystals or blocks at the top so that the heavy vapors will fall and saturate the atmosphere.

In initial work by Monsanto, other chemicals were included which had known strong fungicidal and fungistatic activity and which possessed a vapor pressure capable of giving an ambient protection. The

Possibilities of paradichlorobenzene as an aid in preventing damage by mildew

Division, Monsanto Chemical Co., St. Louis

In warehouse storage of rugs, carpets, leather, etc., para can serve the dual purpose of protecting against both moths and mildew with sufficient vapor concentration.

chemicals selected to test were 8-quinolinol, 2,4,5 trichlorophenol, tetrachlorophenol, orthobenzylparachlorophenol, and paradichlorobenzene. One quart, wide mouth Kerr Mason fruit jars were used as test chambers. From strings fastened through the lid of each jar were suspended a piece of Whatman #2 filter paper 1" x 3", and a piece of heavy filter mat 1" x 3".

The Whatman filter paper was dipped in a 2% solution of Trommer's malt, aired, and dipped in a rich mixed spore suspension of the test fungi. Fungi used were *Aspergillus niger*, *Penicillium "glaucum"*, *Chaetomium globosum*, and *Trichoderma T*-1.

The first four chemicals were impregnated by soaking the filter mat in a 5% tincture of the chemical. The paradichlorobenzene was impregnated by immersing the filter mat in the molten chemical. Approximately 200 cc. of distilled water was placed in each jar to maintain high humidity. Jars were prepared in duplicate with each chemical; and duplicate controls, with the filter mats soaked only in alcohol, were set up. Incubation was at 27°C. for one month. Fungi, especially *Aspergillus niger*, were visible on the filter paper culture medium, and on the string suspending it, in both control jars at the end of two weeks. No growth was ever found in any of the ten medicated jars.

Why Para Selected

THOUGH according to these tests all five chemicals were equally effective, paradichlorobenzene was selected for further study and application for the following reasons:

1. It is effective. Work reported in literature demonstrates that, in adequate concentration in a closed container, paradichlorobenzene is an effective fungistat, though there is no evidence of fungicidal properties.
2. It is convenient to use. Solid at normal room temperature, it can be applied in most instances without any special container, scattered throughout the material to be protected.
3. It is relatively non-toxic. Though used for many years in many homes and institutions as a moth preventive, the reports of injury to human beings or higher animals are negligible. Prolonged exposure to high concentrations of the vapors is disagreeable and probably harmful, but such exposure of personnel is not necessary to the successful utilization of the material against insects and fungi.
4. It is commercially available at low cost.
5. The long standing use of paradichlorobenzene against clothes moths has demonstrated that it is not staining nor otherwise harmful to cotton, wool, leather, paper nor any other common material with which it might be used.
6. Its odor is quickly dissipated when articles are removed from storage for use.

Para Mildew Tests

TO demonstrate that paradichlorobenzene will control the growth of fungi on perishable materials, under such conditions as frequently are encountered in home and industrial storage was the objective of the investigation. It also aimed to make the problem of mildew control as difficult as possible, with a view of proving that paradichlorobenzene is completely effective.

The materials selected for the application tests were representative of the materials to be found in closets and trunks of the average home: Shoes, cotton and woolen clothing, and books or other paper articles. The container chosen was a 3-gallon, wide-mouth, glass jar, which could be tightly closed, but through which fungus development could be observed; 500 cc. of distilled water was placed in each jar to maintain high humidity. Short pieces of glass tubing were piled two inches deep in each jar to keep the articles above the free water level. Two jars were prepared, and duplicate sets of test articles placed in each jar: A pair of brown morocco shoes, one shoe in each jar, a swatch of 8 ounce canvas duck, a swatch of white wool cloth, and a book. The shoes mildewed in summer usage

American Aerovap Inc., Presents—

BUG BULB
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The Acceptable LINDANE VAPORIZER

FOR KILLING INSECTS in the HOME

ONLY $2.98 *

NO FUSS
IT'S CLEAN
NO MESSY ODORS
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Kills

ROACHES
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HOMES — EVERY ROOM — APARTMENT HOUSES
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American Aerovap Inc. again introduces a revolutionary method for killing insects that has been accepted for household use. The BUG BULB is unlike the Aerovap System in that it is not a continuous application, requires no service and the BUG BULB application is rapidly accomplished with lasting results in closed and unoccupied rooms. BUG BULB is simply screwed upright in an ordinary lamp and BUG BULB tablets are inserted in a quantity commensurate with the room size. Tablets are specially sealed in a preservative pharmaceutical packet and the one dozen will last for an entire month when used as directed in a 12′ x 16′ x 8′ room. For smaller rooms (kitchen, bath, etc.) the packet lasts even longer. The cost for the packet of one dozen is only 49c. A sample order of six BUG BULBS and twelve tablet packets, pictured at the right, costs $17.82, f.o.b. New York City. Standard quantity discounts supplied on request.

FREE INTRODUCTORY OFFER

Each BUG BULB unit contains a supply of 24 tablets (2 packets) worth 98 cents.

BUG BULB *is* ANOTHER FIRST
by the pioneers and originators of

AEROVAP the automatic, and scientific system for the convenient, economical and labor-free control of flies in commercial and industrial establishments.

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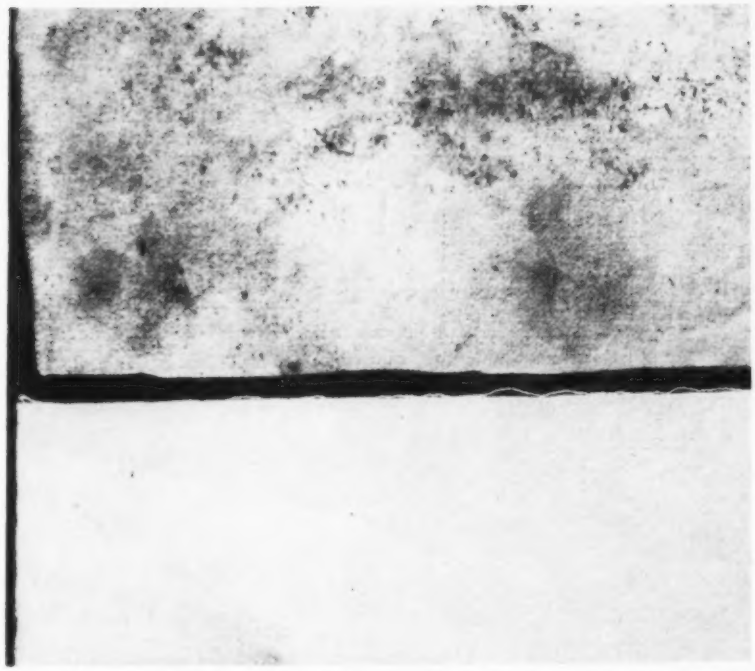
before, and so were known to be inoculated. However, they were thoroughly cleaned and freshly polished before placement in the jars. In addition to the fungi already in the shoes, the contents of each jar were thoroughly sprayed with a spore suspension of *Aspergillus niger, Aspergillus ustus, Penicillium sp., Chaetomium globosum,* and *Myrothecium verrucaria.*

From the lid of the test jar was suspended a cloth bag containing approximately 100 grams of paradichlorobenzene crystals. The control jar was left entirely untreated. Incubation was at 27°C. for 16 weeks. Twice each week both jars were placed in a basin of hot water long enough to increase the humidity in the jars and give a visible condensate on the upper areas of the jar and contents. During these "tropicalization" periods the lids of the jars were removed for about half an hour to permit aeration, avoiding stagnation.



Wool cloth swatches from test jar containing para (bottom) and control jar (top) at conclusion of test—after 16 weeks incubation at 27 degrees C.

Results With Para

MILDEW was first observed on the shoe in the control jar at about the second week. Before the end of the first month growth was observed on the binding of the book and on both swatches of cloth. Growth on the book was centered about the end of the binding where the glue was exposed, but there was also growth on the paper cover and the pages.

At the end of sixteen weeks the materials were removed from the jars for inspection and photographing. No growth of any kind was found on any article in the treated jar at the time of removal. At least half of the original dose of paradichlorobenzene remained unevaporated. After removal from the jars, the articles were held in cardboard boxes for further observations and identifications of fungi. On the fourth day after removal, many spots of dense fungal growth were found on the shoes and book from the treated jar, and spots of discoloration and a musty odor had developed on both the wool and cotton cloth.

The degradation of wool cloth by fungi has not been noted in the literature, and mildewing of wool in carpeting and covered furniture seems to be generally considered as growth of fungi on the oils and dirt deposited in such materials in the course of normal use. In this study, however, fungi were found to attack clean, virgin wool not in contact with other objects.

In spite of the predisposition of these articles to attack by the fungi found in the control jar, the complete absence of growth in the treated jar demonstrates the effectiveness of paradichlorobenzene as a fungistat.

Recommended Uses of Para

IN the use of paradichlorobenzene as a mothicide, the U. S. Department of Agriculture recommends one pound per 100 cubic feet of space under treatment. This treatment is adequate to give sufficient saturation of atmosphere to kill moths and larvae present at the time of treatment. But since fungi are not killed by prolonged exposure to paradichlorobenzene, certain special considerations are necessary in determining the dosage, and in applying it, to obtain mildew protection:

A. The closet, chest, or package must be maintained as nearly air tight as possible. Since vapor of paradichlorobenzene is heavier than air, it is especially important to minimize leakage at the bottom of packages or trunks, and to cover the floor clearance of closet doors insofar as possible. Obviously, closet doors must be kept closed.

B. Since paradichlorobenzene vapors are heavier than air, the dosage must be placed at the top of closets, else the upper portions of the closet will be unprotected. In trunks and boxes, where articles are so packed that air circulation is poor or even negligible, the chemical should be sprinkled through the materials needing protection.

C. The size of the dose is a subjective factor, dependent upon size of space, tightness of closure, air circulation, temperature, and any other factor influencing evaporation and dissipation of the chemical. In a moderate climate, a closet of about 100 cubic feet with a relatively loose door has been afforded complete protection

(*Turn to Page* 171)

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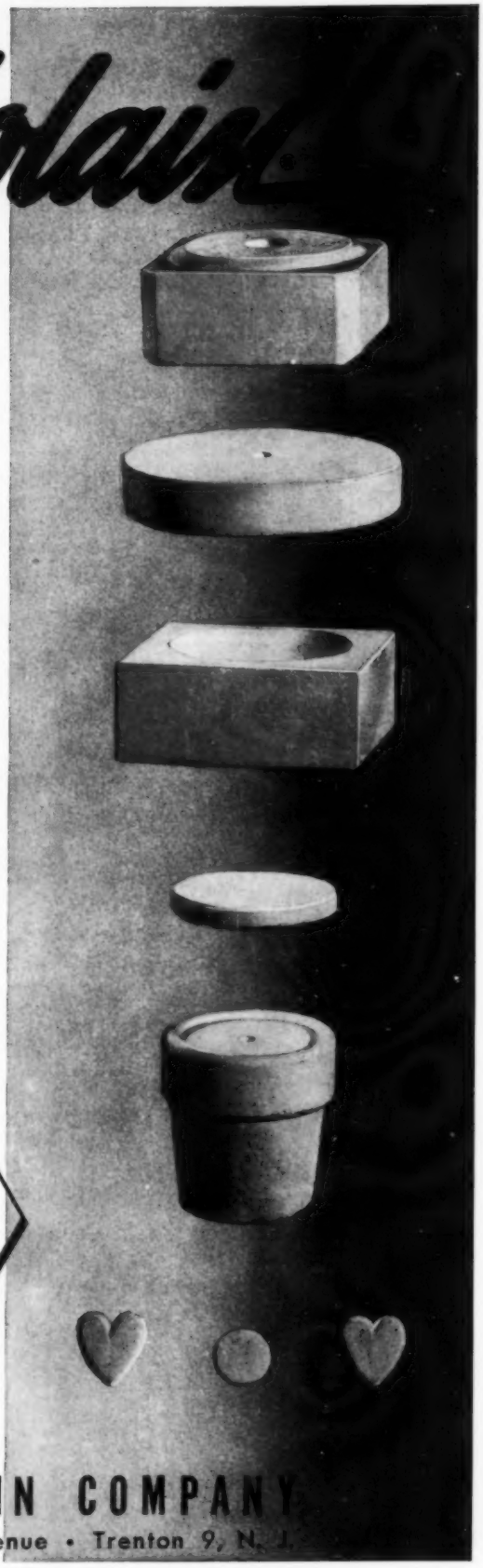

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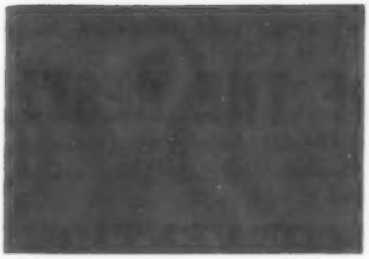

Modern Metal Polishes

By Milton A. Lesser

THE gleam of polished metal has always been a mark of good housekeeping. This sparkle and shine explains why the market for metal polishes, while not particularly spectacular, is steady and dependable. This fact is recognized, not only by those who concentrate on the production of these preparations, but also by chemical specialties manufacturers who look upon metal polishes as a natural member of their line of housecare and industrial maintenance products.

As indicated in Federal Specification P-P-556a, which reflects established practice, the term "metal polish" refers to products suitable for the removal of dulling tarnish, grease and soil from brass, nickel, copper and other metals. Polishes for silver and for aluminum are generally classed by themselves. This is shown by separate standards for silver polish, such as Federal Specification P-P-571b, and for aluminum polish, as in Military Specification, MIL-P-6888. Also somewhat specialized are chromium polishes, which are intermediate between silver and regular metal polishes in general composition.

Federal Specification P-P-556a provides the basic standards for powder, liquid, and paste type metal polishes. According to this specification, all types of metal polish should have good tarnish-removing properties, good luster-producing qualities and afford good protection to the polished surface against tarnishing influences. A properly prepared and applied polish should not: (a) scratch metals, (b) leave the metal discolored or caked with abrasive material, (c) be detrimental in any way to metals, and (d) show any unnecessary caking in the containers.

Polish Requirements

IT is also required that the polish be free from acids, cyanides, grit or other ingredients having an injurious effect on metals. The product should clean quickly, leaving a bright polished surface with a full luster. The polished surface should remain free from corrosion or discoloration for a period of at least 24 hours. The polish should be stable and have good keeping qualities, as well as a one-year guarantee covering such factors as deterioration, evaporation, and caking in the container. Analytically, the amount of volatile matter, at 105° to 107° C., should not exceed 70 per cent by weight of the liquid and paste type polishes. The flammability of the fluid ingredients of such polishes should be more than 39° C.

Various other properties desired in metal polishes have been mentioned in discussions of these products (1). For example, it has been suggested (2) that the polish be of such consistency as to permit easy application without excessive waste. In addition, the polish should rub out easily and smoothly (3). Government sources (4) stress the importance of freedom from such toxic substances as cyanides and nitrobenzene. Freedom from unpleasant odors is also a highly desirable characteristic. Color, while not a major consideration with some metal polish makers, may contribute to the appeal of many products, especially those packaged in clear glass containers.

The primary function of a polish is to remove the tarnish or corrosion that forms on the reactive metals and the dirt and grime that appears on both these and the more resistant metals. Although other agents may play a part, this function is served chiefly by the use of suitable abrasives and cleansing agents. As remarked by Vallance, (5) the success of a polish depends largely on the proper selection and blending of these agents. He points out that solvents, soaps and other detergents serve to remove the dirt and grease, while the abrasives help by loosening the tarnish film and polishing the cleaned metal surface by producing microscopic scratches of fairly uniform character.

Depending on its hardness and particle size, an abrasive may serve as a grinding, polishing or mechanical cleaning agent. Fortunately, the polish formulator has a rather wide range of abrasive materials to choose from. These vary from the mild abrasives, such as calcium carbonate (chalk) and iron oxide (rouge), to

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the several harder silicious materials, like silica flour and pumicite. The hardness of the abrasive should, of course, be related to the hardness of the metal being polished. Too soft an abrasive will give a dull appearance to the metal, while an unduly hard substance will cause scratches or gouge marks.

Particle size or degree of fineness to which the abrasive is ground will also influence the effectiveness of the polish. Also important is the uniformity of size of the abrasive particles. Where there is a wide variance, the larger particles may cause deep scratches. (6) These factors are taken into consideration in the Federal Specification which requires that the abrasive material shall be of such particle size that all of it will pass through a No. 200 sieve.

The use of established procedures to determine the hardness and fineness will provide considerable information concerning an abrasive material. Additional valuable data will be given by determining the so-called abrasive number. The procedure for determining this rating is given in Military Specification MIL-P-15422A. Providing standards for liquid metal polish, this specification was issued on January 14, 1952.

Chemical Action of Polish

SOMETIMES, a chemical action is provided in a metal polish, often as a supplement to the abrasive effect. Among the compounds providing such effects are ammonia, ammonium oxalate, potassium bitartrate (cream of tartar), and oxalic acid (1). Formerly, oxalic acid was used rather extensively in polishes for cleaning brass and copper since it efficiently removed unsightly green verdigris. However, a residue of this acid on the metals may induce further corrosion (3). Moreover, oxalic acid is a toxic substance and over 10 per cent in a polish calls for a poison label. Nowadays, salts of oxalic acid are preferred to the acid itself as chemical cleaning agents (2).

As noted by Crowley, (7) polishes for use on copper, brass and nickel often contain a small proportion of ammonia, which is capable of reacting with the oxides that form on these metals. A good metal polish which takes advantage of this property is given as consisting of:

Kieselguhr	2 parts
Ammonia, strong	1 part
Alcohol, denatured	1 part
Water	sufficient

Enough water is added to make a thick, creamy polish which requires shaking before use. Various abrasives may replace the kieselguhr to provide a higher polishing action. If a small amount of oleic acid is added to the formula, a creamy effect is produced and better suspending properties are obtained.

Detergent and emulsifying effects are obtained when ammonium and triethanolamine soaps are formed *in situ* during the manufacture of a polish. Prepared soda and potash soaps also find frequent use as cleaning and dispersing agents in metal polishes. Obviously, various other surface-active agents fit into this part of the formulation picture. Thus, the incorporation of a compound of the alkyl aryl sulfonate type causes the polishes to obtain a more intimate contact with the metal surface in a shorter time, thereby speeding the polishing action. These compounds also act as emulsifying agents for the oils and solvents and as dispersing agents for the abrasives. (8)

Solvents are often included in metal polishes. In some cases, as in certain liquid polishes, a solvent serves as the vehicle for the abrasive and other materials. In these and in emulsion type polishes, they also serve as cleaning agents against greasy soils. White spirit, naphtha, kerosene and certain types of mineral oil are among the solvents used in polishes. Other solvents are sometimes included to reduce flammability or to improve the cleaning effects. Some years ago, for example, Groggins and Scholl (9) introduced orthodichlorobenzene as a solvent and cleaner for metal polishes. They reported that it had an effective action on the oxides of nickel, silver, copper and aluminum but had only a negligible effect on the metals. It still finds use in metal polishes.

Oils and various fatty substances may be present in a metal polish to serve as lubricants and, in some cases, form glossy protective films on the metal surfaces. Vallance (5) calls attention to the use of such materials as solid fatty acids, which not only assist in the cleaning process but also improve the luster of the metal and leave a thin protective coating on it. He also notes that aluminum naphthenate, which is soluble in white spirit and other solvents, is sometimes employed to increase the viscosity of polishes and improve the water-resistance of the invisible residual films. He likewise calls attention to the use of aluminum stearate in metal polishes. Noteworthy, too, is a recent foreign patent (10) in which it is suggested that a solution or aqueous emulsion of phenyl-2-naphthylamine can be employed to give a high gloss to metal surfaces.

Odor in Polishes

ODOR is becoming an increasingly important factor in metal polishes. It has been found that preparations for both commercial and household use will gain in sales appeal with the adoption of a pleasant odor. Several of the perfume houses now offer special services to metal polish makers in connection with their odor problems. Although some products, including some of the leading brands, are apparently without the benefit of added color, there is little doubt that an appropriate tint will add to the appeal of a metal polish. Rouge is often used to impart both color and abrasive action, but dyes and pigments can be used to provide the desired shade.

Liquid preparations maintain a dominant position among metal polishes. It is said (3) that they are generally preferred over the paste and powder types because of their cleanliness and ease of application. Moreover, when considerable tarnish is present, it is removed more efficiently by liquid than by paste type polishes. (4)

As already indicated, in addition to the general inclusion of liquid type products in the Federal Specifica-

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Liquid metal polishes, most popular of the three types, are classified according to vehicle base: solvent, aqueous, emulsified.

tion for metal cleaners, there is a Military Specification (MIL-P-15422A) devoted solely to liquid metal polish. According to this standard, "Liquid metal polish shall consist of a noninflammable liquid containing a finely divided abrasive, suitable for the removal of tarnish from brass, nickel and other metals, and shall produce a lasting luster thereon." The polish must be free of substances harmful to personnel or metals.

In listing performance requirements, the standard states that the polish must remove at least 65 per cent of the tarnish and must effect an average restoration of luster of not less than 85 per cent when tested by the specified method. With regard to retention of polish, it is required that, after aging polished panels for 24 hours, no single reading shall be less than 95 per cent of the corresponding value obtained before aging. Requirements are also given with respect to abrasive number, "caking number" and inflammability.

Three Liquid Types

LIQUID polishes may be divided conveniently into three main classes. These groupings are based on their vehicles, whether solvent, aqueous, or emulsified types. Since solvents by themselves provide but little suspending action for the abrasives, a soap or similar agent is included in the formula to help remedy this defect. Illustrative of the solvent type of metal polish is the following composition as cited by the Davidsohns: (11)

Ammonium linoleate paste S	20
Naphtha, V.M. & P.	100
Silica	40
Ammonia	2
Alcohol	2

Heat the naphtha cautiously to 60°C. Dissolve the linoleate paste and disperse the silica. Add the ammonia; the heavy mixture thus formed being thinned down as desired by the addition of the alcohol.

The solvent type liquid polish given by Snell (2) is without the hazard of inflammability. Serving to remove greasy soil and leaving a light oil film for increased brightness, this polish consists of:

	Per Cent
Ammonia (sp. gr. 0.9)	2.5
Silica, fine mesh	26.0
Mineral oil (b.p. 145-205°C.)	64.3
Mixed fatty acids	7.2

As remarked by Vallance, (5) the problem of flammability is not encountered in the manufacture and use of water-based or aqueous types of metal polishes. However, he warns that unless they are carefully formulated, such preparations will show a tendency to remain in the cracks or interstices of the metal objects. This disadvantage can be minimized in various ways as, for example, by the use of a small proportion of pine oil. The use of this adjunct is illustrated in the following liquid metal polish:

	Parts
Silica dust	10
Tripoli	10
Bentonite	2
Oleic acid	5
Ammonia (0.88)	3
Pine oil, steam distilled	5
Water	65

In the following fairly simple water-based polish, (2) the ammonium oleate serves as a chemical cleaner to facilitate tarnish removal:

	Per Cent
Silica	23.0
Ammonium oleate	6.0
Ammonium oxalate	3.0
Water	68.0

Quite similar, but using sodium rather than ammonium compounds is the following formula which yields a rather thick, white liquid polish that is said (12) to have been successful commercially:

	Per Cent
Silica, amorphous	25.0
Sodium oleate	5.0
Sodium olalate	1.0
Pine oil	4.0
Water	65.0

The emulsion type liquid metal polishes are capable of utilizing the superior characteristics inherent in both the solvent and aqueous types. When properly formulated, the emulsified preparations offer the advantages of improved stability and a more rounded, combined action. The production of such a metal polish is indicated in the following rather general formula: (13)

Naphtha	62.00 parts
Oleic acid	1.00 part
Abrasive	7.00 parts
Triethanolamine	0.33 part
Ammonia (26°Be)	1.00 part
Water	128.00 parts

In one vessel mix the naphtha and oleic acid until a clear solution is formed. Separately, dissolve the triethanolamine. The addition of the abrasive will depend on the kind used. If of the clay type, add to the aqueous solution, which is then added to the naphtha mixture. Stir the resulting combination at a high speed until a uniform creamy emulsion results. Then add the ammonia and mix well.

Somewhat more specific and detailed is the following formula (14) for a metal polish:

	Per Cent
Kieselguhr	5.0
Silica dust	4.0
Ferric oxide	4.0
Naphtha	19.0
Kerosene	10.0
Oleic acid	2.0
Triethanolamine	0.5
Ammonia (26°Be)	1.5
Water	54.0

Mix the oleic acid with the kerosene and naphtha and then stir in the abrasive. Continue stirring while the previously prepared aqueous solution of ammonia and triethanolamine is incorporated. If desired, the proportion of water may be increased by about 10 per cent.

Cited in the older as well as the newer technical literature (4, 11) is the following formula which has been suggested as a basis for further experimentation:

	Parts
Oleic acid	2.5
Orthodichlorobenzene	50.0
Pine oil	2.5
Diatomaceous earth, air-floated	10.0
Silica dust	10.0
Ammonia (26°Be)	2.5
Water	22.5

Thoroughly mix the first five ingredients. Separately dissolve the ammonia in the water and add this solution to the previous mixture with vigorous stirring.

Well worth noting in connection with emulsion type preparations is an industrial metal cleaning and polishing composition that may be

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applied as a spray, after which the surface is buffed by hand or by a wheel. No doubt adaptable to larger scale maintenance methods, this sprayable emulsion consists of: (15)

	Per Cent
Stearic acid	12.0
Petrolatum	3.0
Sorbitan monostearate (Span 60*)	0.7
Polyoxyethylene sorbitan monostearate (Tween 60*)	2.8
Abrasive	30.0
Water	51.5

(*Atlas Powder Co., Wilmington, Del.)

The abrasive is added to the stearic acid petrolatum and emulsifier mixture at 75°C. Water is added slowly at 80°C. until inversion occurs. After inversion, the remainder of the water is rapidly incorporated.

Also noteworthy, because it offers a new and interesting approach, is a patented (16) industrial liquid metal polishing composition that is applied to the work rather than to the buffing wheel, as is common practice in commercial polishing procedures. A typical example calls for a dispersion made from:

Abrasive	60 parts
Glue	1 part
Diglycol stearate	2 parts
Water	80 parts

It has been said (4) that the principal difference in composition between the liquid and paste metal polishes is the vehicle employed. Thus, paste polishes may utilize a petroleum compound, such as heavy mineral oil, petrolatum or paraffin, as well as various fatty materials, as the carrier for the abrasives and other adjuncts. For example, an acceptable polishing paste can easily be made by mixing equal parts of paraffin and abrasive, to which one per cent of pine oil is added. (17)

In some cases, a solvent-soluble thickener may be used to impart the desired body to a metal polishing paste. An example of such a product, as given by John, (3) consists of:

White spirit	6 gal.
Aluminum naphthenate	12 lb.
Chalk	75 lb.
Red oxide powder	10 lb.

Other means may be employed to impart the desired body to solvent-containing polishing pastes, as in the following illustrative formula: (2)

	Per Cent
Tripoli	53.0
Iron oxide pigment	1.0
Ammonium stearate	5.0
Stearic acid	4.0
Stoddard's solvent	37.0

Soaps, especially sodium soap, are frequently used to impart body to water-based metal polishing paste. A typical example (5) of such a product consists of:

	Parts
Soap, unfilled, chips	10
Silica dust	20
Tripoli, air-floated	20
Pine oil	2
Water	48

Dissolve the soap in the hot water, and with stirring, incorporate the mixed abrasives. While the batch is still hot add the pine oil with thorough mixing and fill into containers.

It is suggested that the incorporation of about five per cent of glycerine in this polish would help to retain the desired consistency of the polish when the container is opened for use.

Also illustrative is the following, which has been described (18) as a good paste for cleaning copper:

Soap, hard	16 parts
Chalk, precipitated	2 parts
Rouge, jewelers'	1 part
Cream of tartar	1 part
Magnesium carbonate	1 part
Water	sufficient

On a water bath, dissolve the soap, previously cut fine, in the smallest quantity of water that will effect solution. Add the other ingredients to this solution while it is still hot, stirring constantly.

From time to time new types of active agents are proposed for making metal polishes. In Wassell's (19) patent, polyoxyethylene diols are described as the essential ingredients in preparing tarnish removing creams. These may be used in conjunction with various wetting agents and other adjuncts.

Powder polishes, which are quite easy to prepare, may consist of simple mixtures of abrasives, with or without various helpful additions. Typical of the simple mixtures is one consisting of: (3)

	Parts
Tripoli powder	25
Chalk	45
Rouge	5

The same source provides the following more rounded formula for a powder metal polish:

	Parts
Pumice, powdered	120
Chalk	120
Soda ash	10
Soap powder	10
Trisodium phosphate	5
Kaolin	5

New ideas in polishing powders are offered occasionally in the patent literature. Rather unusual is the suggestion (20) that a mixture of calcium oxide, washed white chalk and cellulose powder, in finely divided state, be mixed to give a good metal polishing abrasive. Also interesting is a broadly useful powder for cleaning and polishing silver, gold, copper, glassware, cutlery, chromium and nickel plate. The mixture for which these wide claims are made (21) consists of:

	Per Cent
Slate	70.0
Calcium sulfate	14.0
Calcium carbonate	15.0
Ferric oxide	1.0

In contrast, is the following rather specialized powder which is recommended (2) as being particularly useful for cleaning chromium and stainless steel:

	Per Cent
Silica, 325 mesh	88.0
Sodium chloride	6.0
Tartaric acid	6.0

In passing it may be noted that baking soda (sodium bicarbonate) has been advocated (22) as a polish for stainless steel appliances. The powder is sprinkled on a clean, soft cloth and rubbed over the metal, to be followed by rubbing with a second clean cloth.

Chromium Polishes

As previously noted, polishes for chromium are more or less specialized products. Because it is a hard, nonreactive and nontarnishing substance, chromium "polishes" serve largely to remove the soil and grime that forms on the metal, especially on outdoor exposure. Such compositions are especially useful in restoring the luster to chrome-plated automobile trim and the like. A preparation designed (23) for use on chromium sur-

(*Turn to Page* 171)

Buffalo Kay Chemical Co...

SUCCESS may be written with a capital "S" when it refers to the brothers, Philip G. and Edward M. Kaye, owners of Buffalo Kay Chemical Co., 215 Ellicott Street, Buffalo, N. Y. Their sanitation and chemical business started in 1941 as a one-man venture of Edward Kaye, who shortly thereafter, went into military service for some time. After he and his brother, Philip, were both discharged from the service, Edward Kaye suggested that they join forces and work together to build a business. This was in 1946 and Buffalo Kay Chemical Co., has gone ahead steadily since that time.

Philip Kaye is president and is in charge of purchasing. Edward is vice-president and general manager, in charge of sales and service for the company. Each brother is able to fill the other's duties when necessary.

"Service" is the slogan of Buffalo Kay Chemical.

The original small premises were soon outgrown and a larger building was leased to house the showroom and offices, while the facilities of a public warehouse were also required. Five years ago the Kaye brothers purchased their present building in downtown Buffalo. The building is a two story structure, each floor having about 8000 square feet of floor space.

On the first floor are a small display room and storage facilities. Offices, a salesroom, rest rooms and two small supply rooms occupy the second floor. Separated from the main office by a glass brick partition, is a waiting room for outside salesmen or other visitors.

Recently a small building next door was purchased which provides additional warehouse space of about 2600 square feet. In addition negotiations are in progress for the acquisition of another large warehouse located on a railway siding.

The local sanitary supply business of Buffalo Kay Chemical Co. covers a radius of about 50 miles, but orders are continually received from outside that area, one such being a recent order from a customer in the British West Indies. More distant customers in the United States are in the far west, the south and the industrial areas of Boston and other large cities.

Kay Chemical has contracts with independent trucking companies which handle most of the deliveries, but Kay owns one panel truck and a station wagon, which are used for

CAPTIONS

Facing Page

Exterior of the recently acquired quarters of Buffalo Kay Chemical Co., at 215 Elicott St., in downtown area of Buffalo, N. Y. Building showing partially at right was recently purchased by Kay for warehouse.

Photo at upper right is Kay display room on main floor. Philip Kaye, right, pointing to floor equipment, with Edward Kaye.

Philip (left) and Edward Kaye are president and vice-president and general manager, respectively. Philip Kaye is in charge of all purchasing for the firm.

Photo at lower right was taken during a recent sales meeting of Buffalo Kay. Roland G. Ewald, sales manager, stands at extreme left.

This Page

Upper photo was taken from one end of the large warehouse of Buffalo Kay Chemical Co. Ample stocks of all types of sanitation and maintenance supplies and equipment are kept on hand for quick delivery.

The general office of the company is shown in bottom photograph. Miss Adeline M. Everett, extreme right, is office manager.

Seven year old sanitary supply firm's success story written by Philip and Edward Kaye is based on service idea

By Ethelyn Weller

deliveries which may be necessary on holidays or at other times when the regular trucking is not available. If a customer really needs materials or service on short order he will be accommodated at any time, day or night, seven days a week. Both brothers can and will do any of the work required in their business. They often make overtime deliveries or render a service, or help out in the warehouse during a rush.

Operating Principles

IN outlining the Kay business philosophy, Philip Kaye stated, "we operate on the basic premises of 1—trying to give our customers the best materials available; 2—giving immediate service when it is needed; 3—not worrying too much about price,—we are more concerned with quality and which we will never sacrifice for price."

As the business has grown it has increased its sales force and office staff. Four persons are now employed in the general office, with Miss Adeline M. Everett as manager; the warehouse has a staff of four, two of whom are servicemen. There are eight salesmen under sales manager, Roland G. Ewald.

Products handled by Buffalo Kay Chemical Co. include a complete line of materials and equipment for building sanitation and maintenance: cleaning and sanitation supplies and the equipment to apply these materials.

Many of these products are made up from the company's own formulas, packaged and sold under the Kay label. Any established item of any nationally known manufacturer will also be provided if a customer so requests. For instance, since last August, Kay has been a distributor for the line of waxes and floor finishes of S. C. Johnson & Son Co., Racine, Wis. Two Kay products which enjoy wide distribution are a cleaner sold under the registered trade name of "Presto-Brite Cleaner" and a wax, "Presto-Gloss," both of which were perfected after exhaustive tests and experimentation.

Generally the Kay line of sanitation products includes insecticides, soaps, deodorants, disinfectants, dishwashing compounds, synthetic detergents, etc. Equipment handled and sold by the Buffalo firm ranges from large motor sweepers to push brooms, from small industrial vacuums to those of a 55 gallon capacity. Most of this equipment is handled on an ex-

TRIO—FIRST WITH THE BEST!

"AMAZON"® the amazing new scientific silver cleaner with the double-barreled action

IT CLEANS AS IT SANITIZES . . . IN ONE OPERATION!

**"AMAZON" the speedy new silver cleaner at last available in this new concentrated powder!*

• *IT IS ECONOMICAL* — 1 lb. makes 192 ounces (1½ gallons) of this highly efficient silver cleaner. • *IT IS CONVENIENT* — just dip — rinse — dry. No tiresome rubbing or polishing needed. *IT IS SAFE* — non-inflammable and non-abrasive. *"AMAZON"* will remove the tarnish and restore to bright shining lustre silverware, silverplate, brass, copper and gold . . . *AND IT SANITIZES AT THE SAME TIME.*

A KEY ITEM FOR JOBBERS, DISTRIBUTORS and WHOLESALERS
A SOURCE OF PROFITABLE BUSINESS and SATISFIED CUSTOMERS

* Available in 1 lb. canisters—24 to the case. ® Trade-Mark Registered U. S. Pat. Office

TRIO CHEMICAL WORKS, Inc. 341 SCHOLES STREET BROOKLYN 6, N. Y.

HAAG
Liquid Self-Polishing
SAFETY WAX

HAAG
Liquid Self-Polishing
STANDARD WAX

These HIGH QUALITY, CARNAUBA BASE waxes, combined with our diversified line of LIQUID FLOOR SOAPS and CLEANERS, offer Jobbers

A FULL LINE OF FLOOR MAINTENANCE PRODUCTS

HAAG PRODUCTS are sold through Jobbers only — under attractive private brand labels.

Try HAAG for QUALITY and SERVICE. SHIPMENTS MADE WITHIN 24-HOURS!

LIQUID FLOOR CLEANERS • SELF-POLISHING FLOOR WAXES
VEGETABLE OIL JELLY SOAPS • HOSPITAL SOAPS • LIQUID TOILET SOAPS
PINE OIL DISINFECTANTS, ETC.

Write for Samples, Price List and Catalogue Sheets

HAAG LABORATORIES, INC.
14006 SEELEY AVE., P.O. BOX 114, BLUE ISLAND, ILL.

Another view of the large Buffalo Kay Chemical company warehouse. The firm recently acquired the building next to its main plant for additional storage and warehouse space.

clusive basis. For every product sold at Kay Chemical there are, where needed, machines or equipment for applying them. Thus, when a new dishwashing compound was stocked, the company immediately offered equipment and service for dispensing the detergent.

Service Stressed

AS mentioned before, Buffalo Kay Chemical stresses the importance of its services which cover a wide field, going far beyond the actual selling, delivering and installing of merchandise. One of th se popular services is a lavatory sanitation program for local plants, schools, institutions, hospitals and homes. In this service the necessary materials are sold and sales and service men follow up at regular intervals to make sure that customers use the supplies correctly.

Every effort is made to be sure that customers understand each item purchased and any tools or equipment that may accompany it. If some special training is required Kay will supervise the new work and the training of employees in the handling of materials and equipment, continuing this until it is sure that the customer will realize full value from the new merchandise.

In some plants and institutions films are shown to maintenance crews and talks are given on the various phases of plant or institution maintenance. If so requested an entire floor will be cleaned and waxed or some other maintenance job done as a practical demonstration. A Kay salesman or serviceman will work with maintenance employees to show them how to get the best results from the materials or equipment they are selling.

Assistance is given in setting up cleaning schedules and working out practical programs of general maintenance in plants or institutions. Plants where these programs have been adopted report that there have been very satisfactory reductions in maintenance costs, both from the standpoint of labor and material costs. Employee morale rises as the result of cleaner working conditions, also.

Service includes the repair of machines and equipment. For this the charge is nominal, often none at all, and a machine will be loaned to replace any removed for repairs. Thus, a cleaning program is never interrupted because of the lack of proper equipment.

The display room on the main floor has many pieces of equipment, which may be demonstrated or sold directly from the floor if a customer requests immediate delivery. On one wall is a large panel displaying soap dispensers and similar small items, and on the opposite wall are shelves of samples of various products.

Speaking of selling from the floor, Philip Kaye said, "It is a Kay policy to have all available equipment on hand and ready for delivery. In this way our customers never experience the long delay that is sometimes the result of delivery from the manufacturer."

The warehouse speaks, also, of Kay success. "We are crowded now," explained Edward Kay, "but we have expansion plans and the new warehouse will allow us room for a more orderly arrangement of our merchandise."

Materials are stored in definite product categories—equipment in one section; soaps, waxes and such materials in separate departments; Johnson products in a section of their own, etc. Merchandise is arranged in neat rows, palletized for easier handling with a gasoline lift. It is very necessary that merchandise be readily available in the warehouse as 99 percent of all orders turned by 10 a.m. are processed and delivered the same day. There are daily deliveries to all Buffalo area customers and two deliveries each day in the city.

A spot inventory of some materials is taken every 60 days and a perpetual inventory control is maintained. A maximum and minimum is set up on each item. A complete review of all merchandise is made every six months. A record is also kept of the total number of units of each item sold each month. This last has proved very helpful in making adjustments in the ordering of merchandise from manufacturers.

Salesmen's Compensation

KAY maintains an excellent relationship with its salesmen. The policy is that all men report in the morning and work is so planned that they will be home at night. Salesmen are paid salaries, in addition to a sliding scale of commissions, depending on the items sold. Commission sheets and pay checks are prepared weekly and the men are paid each Friday.

"We pay good salaries on the assumption that a man whose wages are adequate for good living is a better worker than one who must be continually worried about finances," Edward Kaye explained. "Our men are satisfied and we feel that this policy has contributed greatly to our success."

The company operates on a (*Turn to Page* 173)

HAND CLEANERS

Put your organization and your customers in the position of benefiting from the "know-how" gained during 40 years of making better and better hand cleaners.

WORKERS like the quick-lathering, gentle scrubbing, easy-rinsing action of Mione. And its very definite skin conditioning value.

MANAGEMENT likes the safe, sanitary, efficient, trouble-free Mione features, plus its economy per pound, low cost per scrub-up, and the basic economy of skilled hands always at top productivity.

EVERYONE who sells washroom supplies will be interested in the competitive price structure, the handsome jobber discount, and the steady repeat orders that come from complete consumer satisfaction.

MIONE SPECIAL Containing G-11* (Hexachlorophene)
is a GREAT new soap with GREAT profit possibilities
Full details on request
**Trade mark of Sindar Corporation*

Mione MANUFACTURING COMPANY
Makers of famous hand soaps for 40 years
COLLINGDALE PENNSYLVANIA

Thousands of Maintenance Managers
use AMERICAN STANDARD man-sized wet-mops, sweep mops and applicators exclusively. The nation's most successful distributors regularly supply those thousands of AMERICAN STANDARD enthusiasts.

for both ROUGH and smooth floors

For years the VICTORY Wet Mop has been our biggest seller. Thousands of maintenance men use VICTORY wet mops exclusively! Heavy-duty, quality yarn . . Your best bet, if you want a mop of extraordinary durability, performance and economy.

"BIG X" SWEEP MOP

This sweep mop is our leader. Snatches up dust on contact. It's nationally famous. A durable giant—available in widths up to 5 feet! Can be removed from the block for washing. Once you try BIG X, you'll use no other.

HOLZ-EM APPLICATOR

You'll enjoy the fast, thorough performance of this luxurious, high-speed applicator. Reduces cost of applying wax, seals, varnish, etc. More professional floor finishers use HOLZ-EM than any other applicator

Jobbers

Complete catalog of our nationally-advertised mops, applicators, dusters, mitts, and custom-made items, on request.

"TOPS IN MOPS"
AMERICAN STANDARD MFG. COMPANY
Incorporated 1908
CHARLES E. KREBS and WALTER O. KREBS
2515 S. GREEN STREET • CHICAGO 8, ILL.

Mildew Control

(*From Page* 153)

for two years, using about one pound for three months during the hot months, and about one pound for the entire winter season. The most important consideration is that the supply of the chemical be inspected periodically and replenished frequently enough to maintain a saturated atmosphere in the closet or container.

Paradichlorobenzene must be maintained, and must be so placed that the heavy vapors can seep down through all objects to be protected. To conserve these vapors, the container must be as tight as possible. If these considerations are observed, protection against fungi will be obtained.

As already mentioned, paradichlorobenzene will be effective in preventing mildew only if the atmosphere is substantially saturated. This means that once the crystals are dissipated, mildew protection will disappear. Likewise, if the crystals or blocks are not distributed throughout the container or if they are not placed at the top so that the vapor will fall, protection will be effected only at the bottom since the vapors will not rise.

Long exposure has taught us that paradichlorobenzene is relatively safe on most items to be protected. However, there may be limitations that have not been investigated or reported. Certain plastics may be harmed by crystals, including certain of the newer synthetic fabrics. It is not entirely certain that paradichlorobenzene will not have some effect on dyes used on cotton and leather since it has never been used extensively here. Nevertheless, based on its use as a moth proofer, paradichlorobenzene is likely to find wider adaptation and usefulness in prevention of mildew damage to stored articles.

Metal Polishes

(*From Page* 165)

faces may be made from:

	Parts
Silica, amorphous	3.0
Kieselguhr	9.0
Oleic acid	8.0
Ammonia (0.88)	2.0
Glycerine	10.0
Soap, hard, powdered	2.0
Water	66.0

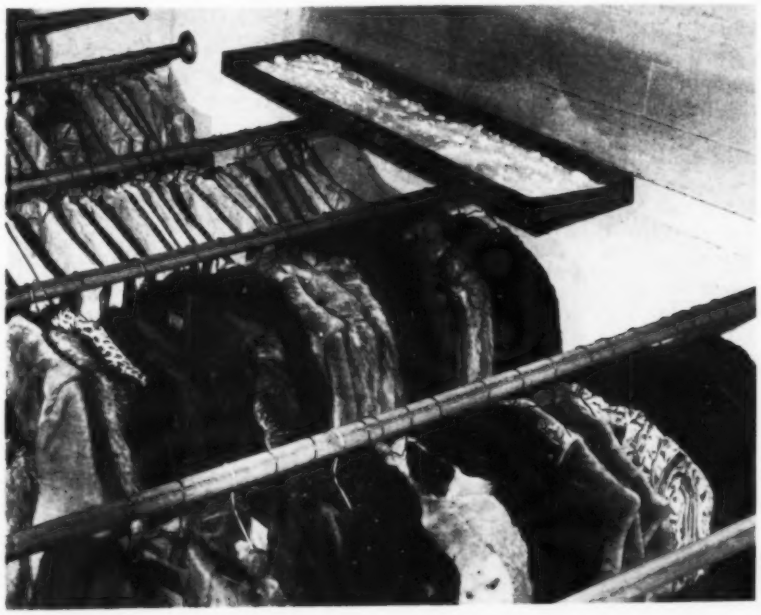
It appears that the silicones, with a well established place in furniture and automobile polishes, will similarly find utility in metal polish formulations. At least one manufacturer has developed a silicone-containing product which, though primarily designated as a chromium polish, is also recommended for use on brass, copper and stainless steel.

Other special ingredients or procedures are sometimes employed to improve or simplify metal polishing methods or compositions. It is often the case that these developments first appear in patent specifications. For example, to facilitate the removal of metallic oxide, tarnish or scale, McDonald (24) uses glucono delta-lactone together with bentonite, a wetting agent, and a mixture of tripoli and infusiorial earth. In another instance, Van Valkenburgh (25) adds zinc oxide to a saturated solution of calcium hydroxide (lime water) to obtain a solution that is especially effective for polishing metals. In an Italian patent (26) a method is given that extends the usefulness of "electrolytic" polishing methods to include not only silver and its alloys, but nickel, brass and other metals as well. In this process, the metal is polished by immersion in a hot two per cent solution of:

	Parts
Sodium carbonate	76
Boric acid	17
Soap, powdered	7

This solution must be used in an aluminum container. If such a vessel is not available, some pieces of aluminum must be placed in contact with the ware that is to be polished.

Para crystals in open pan should be placed high in the storage room as the heavy vapor settles to lower areas. Primarily for moth protection, the para also protects against mildew.



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10) Comptoir general de ventre de

• NO HEAT
• NO STEAM
• NO COMPRESSED AIR
• NO NOZZLE

$39.95
LIST PRICE

Here's the new

MICROSOL* 101

An Aerosol Fog Generator for Home, Office, and Other Small Spaces

At the request of customers who have successfully used larger MICROSOL* models for big jobs, we have developed a strong, efficient machine for smaller work. It's the new MICROSOL* 101. This brand new machine is designed for household use in closets, rooms, attics, and basements... for offices, small theaters and halls...for stores, small food factories, transportation vehicles, and many other confined areas where the larger MICROSOL* models are not indicated. The MICROSOL* 101 works on exactly the same principle as its big brothers ... that is, it mechanically disperses insecticides, germicides, deodorizers, and humidifiers. No heat or steam to disintegrate the liquid. No awkward attachments needed. The MICROSOL* 101 generates an effective fog which completely blankets the space, penetrating the darkest corners and thinnest cracks. MICROSOL* is the modern way to fight insects and germs, to deodorize and to humidify. Write for details.

*TRADE MARK
PATENTED AND PATENTS PENDING

SILVER CREEK PRECISION CORP.
SILVER CREEK, N. Y.

IF IT TAKES
LONGER FLOAT
TO DO THE JOB

BASE YOUR INSECTICIDE ON Penn-Drake® Insecti-Sol

Here's the means to greater killing power and deeper penetration for your insecticide. Free from odor and stain and 100% volatile, Insecti-Sol is an effective base for any insecticide requiring long floating characteristics—including DDT solutions or DDT crystals in low concentrations.

TYPICAL SPECIFICATIONS

A.P.I. Gravity	49/50.5
Specific Gravity at 60°F.	0.775/0.785
Saybolt Viscosity at 100°F.	30/31 sec.
Flash Point C.O.C.	170/180°F
Fire Point C.O.C.	180/190°F
Initial Boiling Point	385/395°F
Distillation End Point	465/480°F
Unsulfonatable Residue	98%
Color	Water white
Odor	Practically none

1878-1953 75TH ANNIVERSARY PENN-DRAKE PRODUCTS

PENNSYLVANIA REFINING COMPANY
General Offices: BUTLER, PENNA.
Refinery at KARNS CITY, PENNSYLVANIA
Branches: Cleveland, O., Edgewater, N. J.
Representatives in Principal Cities
Also Makers of: Rubber Solvent, VM&P Solvent, Cleaning Solvent

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Sweeping Compound Bid

Sanitary Soap Co., Paterson, N. J., submitted the lowest bid of 2.32 cents on 210,000 pounds of sweeping compound in a recent opening for miscellaneous supplies by Federal Supply Service, Washington, D. C.

Buffalo Kay

(*From Page* 169)

five and a half day week and on Saturday mornings sales meetings are held in the salesroom where there are talks and films of products, equipment, uses of this merchandise and of selling techniques. A popular question and answer period usually follows.

The sales room is large and well lighted and the men sit around the big table in which each has his own private drawer. Mr. Ewald, the sales manager has his desk in a corner of the room. On one wall is a map of western New York state showing routes and information about the area. On another wall is a large bulletin board and on a third are shelves containing booklets and other printed material used by the salesmen.

Use Tape Recorder

A FEW months ago Kay purchased a tape recorder which is being used in the sales room. It furnishes a permanent record of all talks, production information discussed at meetings and of the questions and answers. These records may then be run back at any time for reference, for refresher courses or may be used as training materials for new salesmen. This eliminates guesswork or doubts and makes the sales training program uniform for all. The company has a high regard for the National Sanitary Supply Association, using its monthly bulletins and following its sales training program in many instances.

From June to September only a skeleton office and warehouse crew works on Saturday mornings and these people are rotated each week so that all employees may enjoy as many long week-ends as possible during the summer months. Sales meetings are held late Friday afternoons.

All prices are set up by Philip Kaye. New price sheets are distributed throughout the Kay organization at the same time and all sales must conform to prices quoted in the lists.

Offices are well furnished and decorated in attractive color schemes. Employees make up a "happy family", as Philip Kay describes it. They use the sales room during the hour allowed for lunch and usually all eat at the same time, answering calls or telephones when necessary.

All employees have Blue Cross and Blue Shield insurance and there is an additional policy which pays $2000 upon the death of a man or woman while in the employ of Kay Chemical.

Buffalo Kay Chemical Co. advertising is handled by a local agency, Roizen & Rich, which also occasionally helps in sales programs. This agency makes up mailing lists of customers, as well as copy for newspaper and magazine advertising, but most of the work is concentrated in the mailing pieces which are Kay's best advertising medium.

Kay participates in many shows held by schools, plants, etc., of the area, as a part of safety programs. In these the usual practice is to set up a booth with the background made up of an enlarged Kay label and with enough floor space to allow actual demonstrations of cleaning materials, waxes or floor machines and other equipment. This more subtle form of advertising brings in many orders from new customers.

Both brothers have many activities outside the business. Both hold the rank of major of the New York Guard and are members of the Niagara Frontier Society of Industrial Engineers, in addition to membership in other social, scientific and fraternal organizations.

The Kaye brothers have every right to be proud of Buffalo Kay Chemical Co., Inc. "We aren't through growing yet, either," remarked Philip. "We hope to have at least ten more years of expansion and a long, permanent business in Buffalo." And they have earned it, too.

Coming Meetings

A.S.T.M. Committee D-12 on Soaps and other Detergents, annual meeting, Park-Sheraton Hotel, New York, March 16, 17.

AAEE North Central States Branch, St. Louis, March 19, 20, 1953.

American Management Association's 22nd National Packaging Show, Navy Pier, Chicago, April 20, 21, 22, 23.

Canadian Pest Control Operators, 11th annual conference, Ontario Agricultural College, Guelph, Canada, May 11, 12, 13, 1953.

Chemical Specialties Manufacturers Association, midyear meeting, Hotel Drake, Chicago, May 17-19.

Modern Sanitation and Safety Association Trade Show, Mosque Building, Newark, April 14, 15.

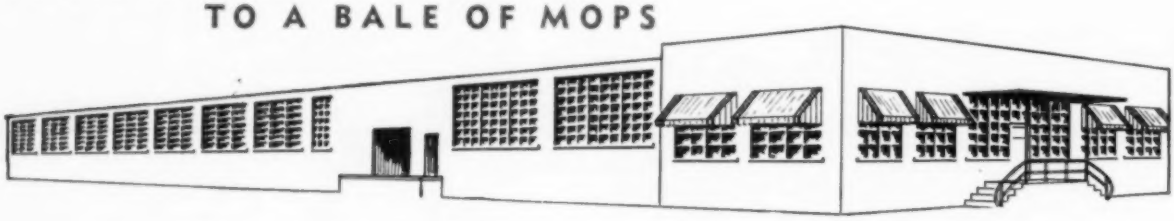
National Pest Control Association, 21st Annual Convention, Hotel Nicollet, Minneapolis, October 19, 20, 21, 1953.

National Sanitary Supply Association, annual exhibit and convention, Conrad Hilton Hotel, Chicago, March 22-25, 1953.

Synthetic Organic Chemical Manufacturers Association, joint meeting with MCA, Greenbrier Hotel, White Sulphur Springs, W. Va., June 11-13.

Toilet Goods Association, annual convention, Waldorf-Astoria Hotel, New York, May 12, 13, 14, 1953.

FROM A BALE OF COTTON
TO A BALE OF MOPS



We are manufacturers . . . not fabricators. . . . A direct mill connection is more important today than ever before. We produce mop heads of all sizes in a wide range of grades and yarn plies. . . . *Piedmont* Quality is your Asset. See our complete line in Booth 116, Chicago Convention.

Piedmont **MOP** *Company*

BOX 1814 • CHARLOTTE, NORTH CAROLINA

National Sanitary Supply Association Member

Visit with us at booth 97 at the N.S.S.A. Convention

to see our line of — FLOOR WAXES • CLEANERS

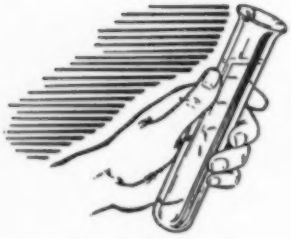
DISINFECTANTS • LIQUID SOAPS • INSECTICIDES • POLISHES

Featuring

para deodorant blocks containing

chlorophyll

NATURE'S GREATEST DEODORIZER



I. SCHNEID, INC.

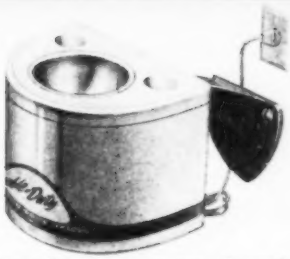
Manufacturing Chemists FOR THE JOBBING TRADE ONLY

916-932 ASHBY ST., N.W. • ATLANTA, GA.

POSITIVE Pest Control Profits for YOU!

Universal's 1953 Lindane Electric Vaporizers

Double Duty Kills insects Kills odors Both at the same time



Vaporizes Lindane for insect control and Chlorolin tablets for odor control. Portable, too. Equipped with legs, and can be easily lifted from its wall bracket for temporary use anywhere insects and odors are a problem.

UNI-VAP

A new, lightweight Lindane Vaporizer of durable steel, Jet Black with silver trim. New construction feature insures constant rate of vaporization, even under varying conditions. Enameled steel cup for greater efficiency. Will not burn out.

Conform to all recommendations of Interdepartmental Committee on Pest Control Comply with all Federal and State requirements. Every unit covered by $50,000 product insurance.

Westinghouse thermostats are factory set but easily adjusted to air conditioning and ventilation. Chromolox heating element is heavy duty type to give years of trouble-free service and customer satisfaction. Quality construction throughout yet priced for easy selling and substantial dealer profits. Advertising mats and pamphlets available. Franchises available in some areas.

Universal ELECTRIC PRODUCTS
2203 Regent St. Madison 5, Wis.

DON'T MISS BOOTH #172

AT THE NATIONAL SANITARY SUPPLY ASSOCIATION EXHIBIT--MARCH 22 to 25

IT'S YOUR KEY TO *Bigger Profits*

SEE THE SENSATIONAL NEW
THOR-O
PLASTIC CLEANER

SEE SUPER-MAFOS
THE FINEST DISHWASHING BRIQUET ON THE MARKET TODAY

SEE THE COMPLETE
"J" CHEMICAL
PRIVATE LABEL LINE OF POWDERED DETERGENTS

SEE SOME OF THE HOTTEST ITEMS IN THE FIELD TODAY

J Chemical Works
602 WEST 27TH STREET, NEW YORK 18, N. Y.

For Better Protection against Pests use these

PRENTOX *PEST-TESTED*

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News

Torgerson in New Post

Gerald E. Torgerson recently was appointed manager of aerosol valve sales for A. Schrader's Son, divi-

GERALD E. TORGERSON

sion of Scovill Manufacturing Co., Brooklyn, N. Y. Mr. Torgerson joined Schrader in 1949 as special representative covering the sale of medical gas products in the United States and Canada. In his new position he continues to handle air force government sales, one of his principal assignments during the past few years.

Geigy Expands Plant

Geigy Co., New York, recently added a 12,000 square foot addition to its plant at Leland, Miss. The addition is a modern, one-story, steel-frame structure that is 100 feet long. It has three clear-span bays of 40 feet each, and is 16 feet to the eaves. The walls and roof are corrugated steel.

Arwell Sanitation Unit

A new sanitation department, embracing a variety of services including consultation, inspection, surveys and industrial cleaning, recently was set up by Arwell, Inc., Waukegan, Ill. In announcing the creation of the company's new facility, Emmet Champion, director of sanitation, revealed that Arwell will sponsor a special sanitation seminar and luncheon, to be held at the Sheraton Hotel, Chicago, on March 20. Some of the topics to be discussed are "Rodent and Insect proofing," "Sanitation—a Way of Life," and "Practical Insect Control". Arwell has arranged to have a panel of speakers who will discuss many phases of sanitation.

Noxon Demonstration Kit

A special demonstration kit for "Noxon" metal polish is now being sent to sanitary supply distributors by Noxon, Inc., Jersey City, N. J., to induce greater distribution in the trade. This demonstration kit consists of a small bottle of "Noxon", a strip of tarnished brass and a wad of cotton. Accompanying the kit is a jobber's price list, an order form and a letter which invites the reader to test "Noxon" on the tarnished brass strip. Also, the letter describes "Noxon" as a fast-acting polish that cleans and shines all metal surfaces safely in one operation, and advises the reader to try the cleaner on any metal, tile enamel or glass surface.

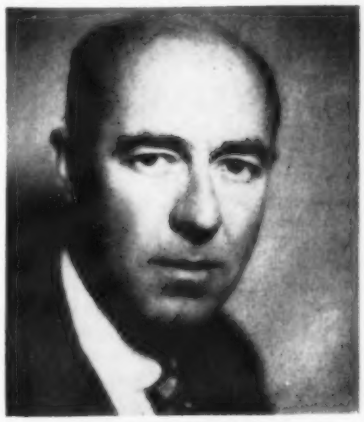
Joins Chemical Service

Chemical Service of Baltimore recently announced the appointment of William Schulman as technical director in charge of production, research and development. Mr. Schulman comes to the company with a background of 25 years in the chemical specialty field. For the last 17 years, he has been technical director for a manufacturer in this field.

Thompson as Consultant

Friar M. Thompson, Jr., resigned as manager of the Insecticide Department of the Prentiss Drug & Chemical Co., New York, on March 1 to establish his own consulting business with office in Athens, Ga. He was associated with Prentiss for the past eight years and prior to that was engaged in insecticide research, development and sales work with the Hercules Powder Co., Wilmington, for fifteen years.

Mr. Thompson will specialize in insecticides, rodenticides, herbicides, fungicides, seed disinfectants, and in chemicals related to the southeast grasslands program. His research and testing facilities will include a 300 acre farm near Athens, Ga. He will also do work in rodent and insect control for household and industry, and in associated problems of sanitation.



FRIAR M. THOMPSON, JR.

He has become associated as staff consultant with the Industrial Toxicological Laboratory, Philadelphia, and the Wisconsin Alumni Research Foundation, Madison, Wisc. Mr. Thompson holds degrees in agriculture and entomology from the University of Georgia and Rutgers University.

Wax Hearing Apr. 16

A hearing on proposed trade practice rules for the floor wax industry is to be held in Washington, D. C. April 16. The hearing marks the third set of rules proposed by the Federal Trade Commission. No action was taken on two sets of rules previously proposed after hearings and considerable objections by the floor wax industry.

Bartleson Joins Ethyl

The appointment of John D. Bartleson to the automotive products division, research and engineering department, Detroit, was announced recently by Ethyl Corp., New York. Prior to joining Ethyl, he was with the chemical research division of Standard Oil Co. of Ohio, specializing in hydrocarbon synthesis and the development of lubricating oil additives.

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For offices, factories, stores, restaurants, hospitals, theaters, bars, etc. This completely automatic unit is made to conform with most state and Federal requirements. It has an on-off pilot light, overload fuse to prevent excessive output and thermostat for temperature control.

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It dispenses the revolutionary, new insecticide, Metho-Nox* and can be *safely* used in continuous operation or combined with Columbia's Coldane for fumigation purposes. It is fully automatic and of durable steel construction.

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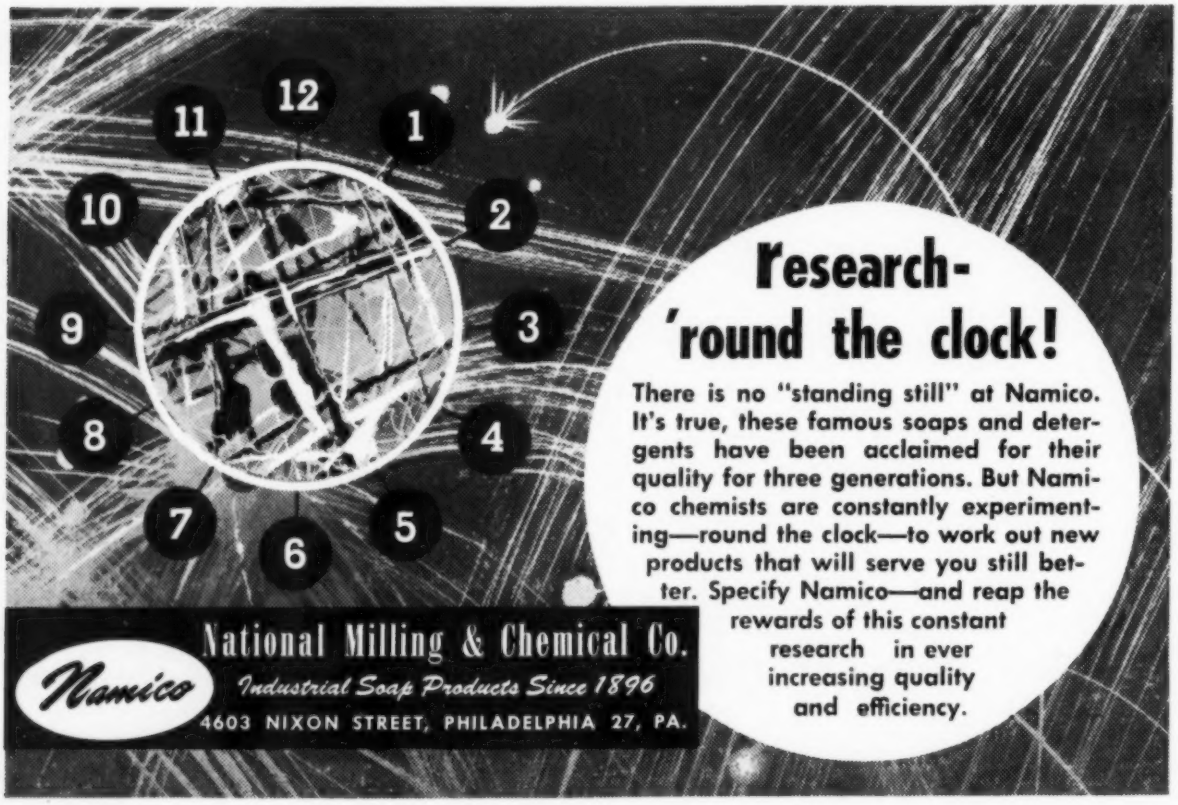

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Foster Joins ASI

William E. Foster recently joined the staff of sanitarians of the American Sanitation Institute, St. Louis. Prior to his new position, Mr. Foster was quality control supervisor for Sheffield Farms Co., New York. Mr. Foster has served as sanitary officer of the Blackwell, Okla. health department where he had charge of the inspection and control of eating and drinking establishments, and supervision of laboratory and field analysis.

WILLIAM E. FOSTER

McCormick Names Ellis

Edward T. Ellis recently has been appointed director of human relations for McCormick & Co., Baltimore. He formerly was personnel director of the company. He succeeds Rear Admiral Frederick J. Bell, USN (Ret.) who resigned to become executive vice-president of the National Automobile Dealers' Association.

Warfarin Award Campaign

The University of Wisconsin's Alumni Research Foundation, discoverers of warfarin, and its two warfarin licensees, S. B. Penick and Co., New York and Prentiss Drug and Chemical Co., New York are jointly sponsoring an "Achievement Award Campaign" by a program of community rat control drives. This is the second such campaign and is aimed at the nation's principal organized youth groups—Future Farmers of America and 4-H Clubs. As a part of this program there is being offered community campaign control kits. Kits are being sent to communities and newspapers in over 400 communities. Also, warfarin exhibit display material has been supplied to *Rural Gravure*, a farm publication, for use in connection with its activities in county fairs, festivals and the like throughout the area covered.

Paxon Expands Facilities

Paxon Manufacturing Co., producers of sweeping compound, recently added 4000 square feet of floor space to its storage and shipping areas at its headquarters at 1026-28 N. Third Street, Philadelphia. Founded by Charles Paxon in 1907, the firm is now operated by his son, Thomas D. Paxon, president and treasurer, and his brother, C. S. Paxon, Jr., vice-president and secretary.

CMC for Soil Conditioners

New soil conditioners for home gardeners, based on a special type of CMC, will be available this spring, according to a recent announcement by Hercules Powder Co., Wilmington, Del. Preliminary research data from small-scale field tests, undertaken by Hercules, indicate that CMC is of value in conditioning problem soils such as clay or high-clay content soils that crust badly.

New Chlordane Booklet

Residex Corp., Newark, N. J. recently released a booklet on the use of chlordane for termite control. The folder describes principles of soil treatments, methods of application, and advantages of using chlordane for termite control and dilution charts. Copies may be obtained by writing directly to Residex Corp., Centre Street, Newark, N. J.

Continental Elects Betner

Benjamin C. Betner, Jr., recently was elected a vice-president of Continental Can Co., New York at a meeting of the board of directors. Mr. Betner was formerly president of the Benjamin C. Betner Co., the assets and business of which were recently acquired by Continental. In his new capacity, he has assumed charge of the Betner division, which continues as a separate unit, manufacturing small and medium size bags.

Eisenhart Heads J. G. Roger

John J. Eisenhart recently resigned his position as general manager of Chemical Service Co. of Baltimore, which he held for the past six years, in order to take a more active part in the newly formed J. G. Roger Chemical Co., Baltimore, of which he is president.

Executives of Towlsaver, Inc., Los Angeles, Jay C. Perrin, Jr., Jack L. Perrin, vice-presidents, and Don Dean, secretary, discuss the expansion of the firm into territory east of the Mississippi River. Arrangements have recently been made with one of the larger eastern paper mills for the manufacture of Towlsaver Towels for distribution in that territory. At the same time, the three officers have been traveling in the eastern territory appointing distributors for the Towlsaver Industrial Roll Paper Towel and dispenser.

* it's tough

FRANKLIN'S "TWENTY-ONE" WAX... truly a heavy duty wax—contains 18% solids—self-polishing. Ideal for floors subjected to heavy traffic. One coat often replaces two coats of ordinary wax, thus reduces maintenance and re-waxing costs.

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FRANKLIN'S RUBBER GLOSS WAX... a tough, long wearing, self-polishing wax. Cuts maintenance costs on linoleum, rubber, asphalt tile, wood, etc. Withstands water and damp moppings. Classified by Underwriters' Laboratories as anti-slip.

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Available in half-pint, pint, quart, and 2-qt. sizes. Fine floating cloud from 4-Jet nozzle knocks down 20% more flies... kills 25% more by actual test.

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Every metal part all stainless steel for dependable, long life. 2-Spray nozzle gives fine mist or wet surface spray with a flick of the finger.

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Shellac C.S.M.A. Luncheon Topic

A TALK on shellac, its production, properties and use in floor waxes, was the highlight of the Feb. 18th luncheon of the Chemical Specialties Manufacturers Assn. held at the Roosevelt Hotel, New York. The luncheon address by Henry E. Blanchford, technical director of Mac Lac Co., New York, was preceded by a morning meeting of the C.S.M.A. executive committee. Approximately 75 persons attended the monthly luncheon meeting, the largest number present since the luncheons were started last year.

The next monthly C.S.M.A. luncheon will be held at the Roosevelt Hotel, New York, March 18 and will feature a program devoted to a discussion of essential oils and perfuming materials.

Mr. Blanchford opened his discussion by stating that shellac producers had long wondered why floor wax manufacturers had ignored shellac as a raw material. He explained that housewives want a floor finish that can be applied to asphalt tile, linoleum and similar types of surfaces and can be easily removed a few weeks after application so that the floor can be given another treatment. It is possible to provide such a product through the use of shellac, Mr. Blanchford stated. He pointed out that the shellac type waxes have expanded the market for floor waxes.

"Shellac improves the toughness and scuff resistance of emulsion type waxes", the speaker said.

In describing the origin of shellac, Mr. Blanchford pointed out that the word "lac" means 100,000. It is the excretion of the female lac bug feeding on sap of trees in India from which shellac is derived. The British idea of promoting the spread of Brood Lac infestations on various trees has been carried on by the Indians. He also pointed out that it requires a million and one-half lac bugs to produce a pound of shellac.

Grading of shellac is now being done in the primary market in Calcutta by chemists trained in American plants producing shellac, Mr. Blanchford stated. When the shellac is graded in India a certificate is issued which is required to draw against a letter of credit. In this way adulteration is virtually eliminated and a uniform quality of shellac is obtained.

Mr. Blanchford concluded his talk with a description of the chemical structure of shellac, which has a molecular weight of from 900 to 1000, which he compared with the molecular weight of from 60,000 to 100,000 for casein. There is no shellac molecule per se, Mr. Blanchford explained, rather it is an aggregate. Shellac is not a lineal polymer, but a group of three polymers.

Being uniform at the source shellac is a standard as a natural resin, Mr. Blanchford stated.

He advised that bleached shellac tends to polymerize on ageing. It is preferable to use fresh material and keep it under refrigeration.

No other synthetic can be put into 25 percent solids and remain as stable as can shellac, the speaker stated. He added that combinations of shellac soaps and shellac solvents might be the answer to lower flash points in aerosol type hair lacquers.

Shellac today is a different product from that of the Thirties, being considerably more uniform now, Mr. Blanchford said.

In answer to questions, the speaker said that it is not possible to differentiate between the wearing quality of raw and bleached shellac. He also stated that up to 80 percent shellac may be included in a water emulsion type floor wax.

Mr. Blanchford concluded by saying that shellac as a floor finish will give something in the way of beauty that no other floor finish material can provide.

Buys GE Vacuum Unit

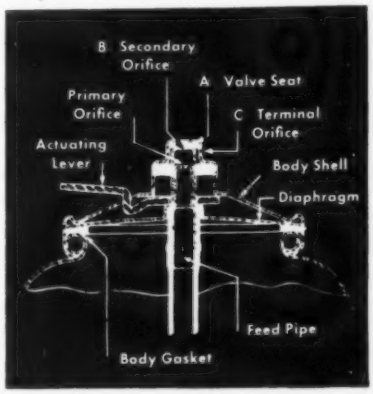
Multi-Clean Products, Inc., Saint Paul, recently completed negotiations for the purchase of the manufacturing facilities of the industrial vacuum cleaner department of General Electric Co., Bridgeport, Conn. The transaction includes all of the production dies, patterns, fixtures, and inventory. A new factory is under construction in Saint Paul for the production of vacuum cleaners. The company will distribute the vacuum cleaners under a new trade name, though the construction of the various models remains the same.

Gair Names Gibbons

Robert Gair Co., New York, manufacturers of folding cartons, paperboard and shipping containers, recently announced the appointment of O. R. Gibbons to the newly created position of sales promotion manager for the folding cartons division. Mr. Gibbons joined the Gair company in 1945 after serving in the U. S. Air Force, and has been in the sales department of the folding cartons division for four years. He attended Washington University in St. Louis.

New Risdon Aerosol Valve

A new dispensing valve recently was introduced by the valve division of Risdon Manufacturing Co., Naugatuck, Conn. Some of the features of the valve are: flexible metal diaphragm and valve seat, made of Nylon or Teflon which permits the use of all standard propellents, including high solvency propellents in aerosol packaging; and the proximity of the secondary orifice to the terminal orifice, minimizing the possibility of clogging due to internal drying. The valve produces a soft spray-cloud of extremely minute and uniform particles necessary for room deodorants.



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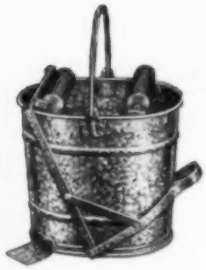

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(tapered sides) available in 14 and 20 quart capacities.

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TWIN OVAL PAIL MOPPING UNITS
with 30 quart capacity pails. A complete "Hand-Dipped" Galvanized Unit. Squeezer. Pails and Truck.

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Reasons why the Atlantic "VANCO" line is the preferred equipment for maintenance work is because of its ability to stand up under gruelling punishment day after day. A contributing factor to its greater durability and longer life is the Atlantic process of "HOT DIP" GALVANIZING BY HAND. Here, the extra heavy coating of zinc builds up *extra* protection against wear and corrosion . . . reduces replacement costs to a minimum! *Write Today for Literature and Prices.*

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SANITARY SUPPLIES MANUFACTURERS FOR DISTRIBUTORS — JOBBERS — WHOLESALERS

Walglen Corp. Moves

Walter Gruenwald, president of Walglen Corp., Charlotte, N. C., distributors of sanitation chemicals and supplies, recently announced that the firm is now located at 1211 S. Clarkson Street. The new plant also includes warehouse space. The firm formerly had its offices in the Independence Building.

$100 Million in Sales

Retail sales in 1952 topped $100 million for "Stanhome," trade name of Stanley Home Products, Inc., Easthampton, Mass., according to a recent article in *Monsanto* (Chemical Co., St. Louis) *Magazine*. This compares with sales of $72,000 in 1931. The firm was founded at the peak of the depression by Frank Stanley Beveridge, who is now board chairman. He stepped out of his job as sales consultant to Real Silk Hosiery Mills, and started to manufacture household chemicals in a tobacco shed in 1931.

Stanley started as a house-to-house company (based on A. C. Fuller's theory of door-to-door selling) and sales rose steadily from $72,000 in the first year to approximately $600,000 retail in 1937 and over a million in '39. Then came what Stanley calls the co-operative plan of selling: the hostess party plan and the club party plan. On the average day about 10,000 parties are given by women. Most full-time dealers average about 10 parties a week and yearly incomes of $6000 are not unusual. Unit managers earn up to $10,000 a year.

Revoke Tin Controls

All controls over uses and inventories of tin were revoked recently by the National Production Authority. NPA retained only the requirement that monthly reports on form NPAF-7 be submitted by consumers and dealers on tin stocks, receipts, shipments, and consumption. The order to remove controls, government administrators said, was made possible by the present and foreseeable United States tin position. The supply of tin contracted for and otherwise obtainable in world markets for use in this country now is sufficient to balance against demands, both government and civilian, is the belief of NPA officials.

Of the two orders relating to tin, the first covers tin controls covered by order M-8. The second, controlling use of tin in the manufacture of tinplate and terneplate is covered by order M-24.

In addition, several other orders have been revoked. They include: M-25 covering cans; M-26 covering packaging closures; M-27 covering collapsible tubes.

Smith Sprayer Circulars

D. B. Smith & Co., New York recently released descriptive circulars on the "Blizzard Sprayer", the "Ritesize Sprayer", the "Speedex Sprayer", and the "E-Z Knapsack Sprayer." The catalog sheets give information on what the various sprayers do, specifications on how to use them, and how to secure repair parts when needed.

Moore Corp. Moves Offices

John B. Moore Corp. recently moved its offices to the Lee Building, Nutley, N. J. Mailing address remains P.O. Box 3, Nutley, N. J. The company specializes in solvents for industrial cleaning and maintenance operations.

At the same time, the company announced recent appointments to its staff. John A. Campbell of Garfield, N. J. was named sales manager for northern New Jersey. Philip A. Houghton, Boston is handling distribution in Massachusetts, Rhode Island and northern New England, and R. C. Miller, Jr., is safety consultant in the use of the company's products.

Atlas to Build Offices

Atlas Powder Co., Wilmington, Del., recently announced the acquisition of a tract of land of approximately 45 acres, about four miles north of Wilmington on U. S. Route 202, for the construction of a new and modern air-conditioned office building. The structure will house over 400 employes of the various administrative departments now located in downtown Wilmington. Completion and occupancy is expected within three years. No laboratory or manufacturing activities will be moved to the new building.

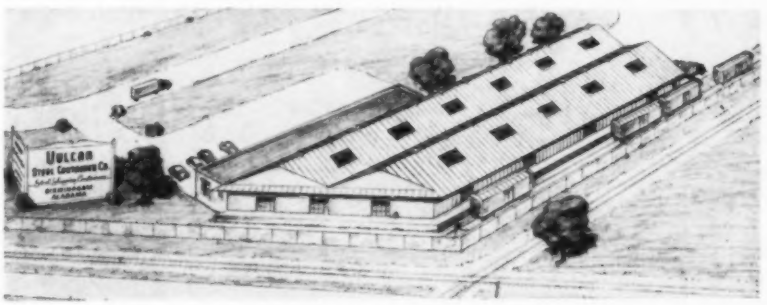
New American Can Division

Creation of a new division concerned with converting experimental containers to commercial use by finding ways to mass-produce them on high speed manufacturing lines was announced last month by Dr. R. H. Lueck, general manager of research and technical department, American Can Co., New York. H. R. Vitense of Berwyn, Ill., a veteran of 32 years with Canco, will be a part of the research and technical department, Dr. Lueck announced.

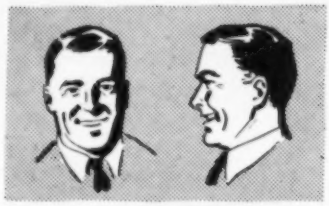
Spraying Demand to Grow

A growing demand for spraying and dusting equipment promises to cause continued expansion of this $80,000,000 a year industry, is the opinion of R. B. Chapin, president of the National Sprayer & Duster Association. In a talk made before the group at its recent quarterly meeting in Chicago, Mr. Chapin claimed that among the causes for growth is an increase in the insect population. This means a rising demand for equipment to spray and dust.

New plant in Birmingham, Ala., of Vulcan Steel Container Co., for producing full line of steel shipping containers ranging in size from one to seven gallons.



WANTED!



A. JOBBER

WHO LIKES THE COLOR OF MONEY

We want another jobber whose hobby is Profits — particularly profits that are easy to get. He will handle what is not just *one* of the finest but *THE* finest all-purpose Metal Polish, with a 50-year reputation for excellence. Today this polish — NOXON with new added Shine-Speeder ingredient — is making real money for hundreds of wideawake jobbers. Interested? You should be! For the full story, tear out this ad, clip to your letterhead and say "Show me!"

NOXON The All-Purpose Metal Polish

Noxon, Inc., 812 Jersey Ave., Jersey City 2, N. J.
Booth 140 — N S S A Convention

SHANCO RESINS

for

Emulsion Waxes

Blend in Steam-jacketed
or
Direct Fired Kettles

Alkali Soluble Resins
for
Leveling Agents

Custom RESIN Quality

Shanco Plastics & Chemicals, Inc.

Tonawanda, N. Y. BE 0383
Philadelphia, Pa. RI 6-3875
Brooklyn, N. Y. EV 9-3480

Agents in all Principal Cities

"This Job is a Cinch with HAVILAND Products"

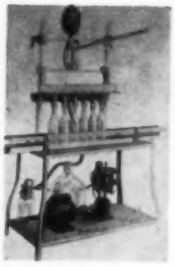
Thoroughly tested for strength, wearability and ease of use, Haviland products make the job a cinch for the user. The supplier's job is a cinch too . . . he knows he has customer satisfaction and repeat sales when he handles the Haviland line. Come around and look over our products at the N.S.A.A. convention, Booth #81 or write for information.

WARREN HAVILAND CORPORATION
1810 CHOUTEAU AVE. • ST. LOUIS 3, MO.

"Better Products at Competing Prices"

"SCIENTIFIC"
portable SEMI-AUTOMATIC STRAIGHT LINE

VACUUM FILLER



- Fills Directly from Drum; No Overhead Tanks Required.
- Vials to Quarts, Glass or Tin.
- Up to 10 Spouts for Small Containers. Quick Change-Overs. Cleans Itself, 5 Minutes.
  ONLY ONE OPERATOR for Loading and Filling.

LOW PRICED BENCH AND STAND MODELS

ACTUALLY PAYS FOR ITSELF IN A FEW WEEKS

WRITE FOR FREE TRIAL OFFER

Whirlwind SCREW CAPPER

Replaces Uncertain Hand Capping; Eliminates Fatigue and Worn-Out Fingers.

Any Cap — Any Container — Perfect Sealing! Adjustable Tension Device Controls Cap Tightness. Portable, Flexible, Fast; Easy to Operate.

Can You Afford to Be Without It?

ACT NOW! Send Sample Caps for FREE TRIAL.

SCIENTIFIC FILTER COMPANY
59 Rose St. New York City 38, N. Y.

"Carnival" of Chemical Specialties

A "CHEMICAL CARNIVAL" of best selling household chemical specialties was held Feb. 18-28 in the housewares department of John Wanamaker department store, New York. Forty manufacturers of such household chemical specialties as household deodorants, dip silver cleaners, dust repellents, metal polishes, window cleaners, liquid sand paper, garbage can deodorant, etc. participated.

Full page newspaper advertisements with circus borders and 2/3 page advertisements in circus type faces told about the presence of Wally Cox, the "Mr. Peepers" of television, who spoke on "Wonder Chemicals".

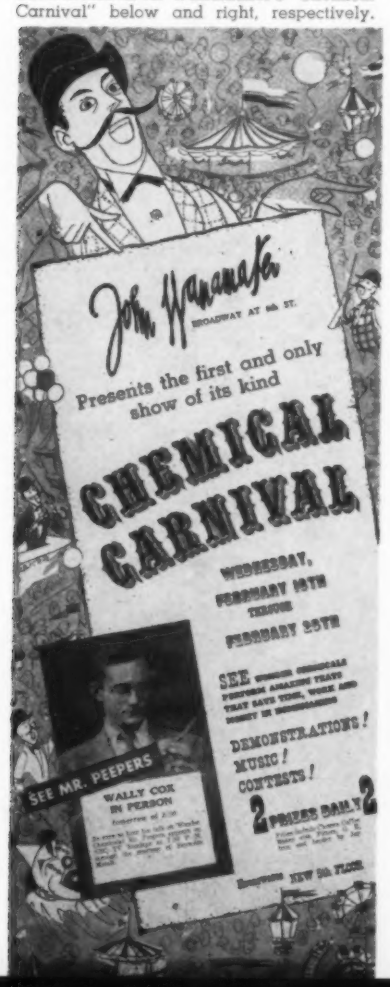
The carnival aspects of the promotion were given authentic flavor in the fifth floor housewares department of Wanamaker's with barkers and music, bright red and white decorations and midway like booths.

The pioneer of this successful promotion is John Tobin, housewares buyer at Wanamakers. He thought of organizing this unique show after several chemical specialties manufacturers had expressed satisfaction with the result of full page advertisements which the department store had placed in New York newspapers recently. The advertisements carried special editorials calling attention to the development of certain household chemical specialty products, and how they can help make life easier for American housewives.

The forty manufacturers who participated were selected by Mr. Tobin because their products had proven to be star sales items consistently through a year and a half in the chemical specialties section of the housewares department. The manufacturers agreed to supply the demonstrators for the show, and assisted in setting up the displays. No one item received greater prominence in displays, but all were given equal space within the 20 booths. Wanamaker built the booths and arranged the promotion through its advertising department, which prepared the full page, cooperative newspaper advertisements. Awarded daily to visitors were two free prizes, a coffee maker with filters and an electric broiler: The manufacturers and products participating included:

"Air Freshner", Mathew Products, New York; "Bruce Cleaning Wax", E. L. Bruce Co., Memphis, Tenn.; "Cedadisk", Cedacote Corp., Memphis, Tenn.; "Chrome Kleen", Wolcott Corp., Hartford, Conn.; "Clear-a-Drain", Agava, New York; "Clearsite", Clearsite Laboratories, New York; "Dri-Klean-a-Garage", Dri-Klean-a-Garage Co., Paris, Tenn.; "Dust-off", Ade-o-Matic Co., Chicago; "Easy Off", Wolcott Co., Hartford, Conn.; "Evree", Embree Mfg. Co., Elizabeth, N. J.; "Glamorene", Jerryclaydon, Inc., New York; "Glas Spray, Glasspray, Inc., New York; "Instant Dip", Lewal Industries, New York; "Majic Leaf", Paul-Reed, Inc., Charlevoix, Mich.; "Nul", Kacy Co., New York; "No Moth Solid", Reefer-Galler, Inc., New York; "Odor Ban", Odor-Ban Co., Cleveland; "Plant Shine", Schulz Co., St. Louis; "Quel", W. B. Farrell, Inc., Pontiac, Mich.; "Re-Clean", M. Lidell, Inc., New York; "Reviva", Jackson Studios, Inc., New York; "Shine Off", Shine Off Co., New York; "Slick", J. N. T. Mfg. Co., New York; "Sta-Cleen", L. M. Gould Co., San Francisco; "Sta-White", Seeman Brothers Co., New York; "Tuch On" Tuch-On Products, New York; "Trav", Trav Inc., New York; "Whink", Whink Products Corp., Eldora, Ia.; "Janie Spot Eraser", R. S. Cowen, New York.

Two-thirds and full-page daily newspaper advertisements for Wanamaker's "Chemical Carnival" below and right, respectively.


John Wanamaker
BROADWAY AT 9th ST.
Presents the first and only show of its kind
CHEMICAL CARNIVAL
WEDNESDAY, FEBRUARY 18TH THROUGH FEBRUARY 28TH
SEE MR. PEEPERS
WALLY COX IN PERSON
DEMONSTRATIONS! MUSIC! CONTESTS!
2 PRIZES DAILY 2

COME ONE COME ALL TO THE CHEMICAL CARNIVAL
SEE THESE AND OTHER WONDER CHEMICALS IN OUR CHEMICAL CARNIVAL
Open Wednesday 9:30 A.M. to 9
John Wanamaker
ODOR-BAN $1.69
DUST-OFF $1.29
STA-WITE 98¢
EASY-OFF 98¢
INSTANT-DIP 98¢
"INSTANT-DIP" CLOTH 49¢
NEW QUEL $1.00
LIQUISAN 98¢
COME ONE COME ALL TO THE CHEMICAL CARNIVAL

FLOOR WAX PROBLEMS ? ? ?

Write to: **JACOB S. BRONCATO**
"JAKE"

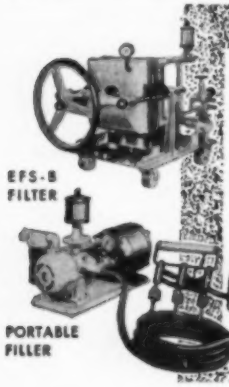
MANUFACTURERS: We offer ammonia-soluble resins and waxes . . . formulations for low cost and high quality waxes . . . technical service with experienced "know how".

JOBBERS: We offer high quality waxes at contract levels . . . special prices on yearly commitments.

SAMPLES AND LITERATURE ON REQUEST. INQUIRIES INVITED.

CATO CHEMICAL CO. • 610 LINDEN AVENUE • ELMHURST, ILLINOIS

SPECIALIZING IN WAXES AND RESINS FOR MANUFACTURERS AND JOBBERS ONLY



For FILTERING & FILLING
small plant or batch lots of
PHARMACEUTICALS,
COSMETICS,
CHEMICALS,
SOAPS, Etc.

Two Ertel units that make small production efficient. They have all the desirable features of Ertel high production equipment: EFS-B FILTER has single hand wheel for simple trouble-free operation, bronze or stainless circulatory system, accomodates accepted Ertel Asbestos Filter Sheets. PORTABLE FILLER has automatic overflow system, non-drip spouts, bottle size flexibility up to gallons. And, both units can be easily moved from place to place. Write for detailed information on this important equipment... it belongs in your plant.

ERTEL ENGINEERING
CORPORATION
KINGSTON 6, NEW YORK
Branch Office & Showroom Located in New York City
COMPLETE LINE OF
Liquid Handling Equipment

A producer of sulphonated products has entered the field of Alkyl aryl sulfonates and is now offering to chemical manufacturers, jobbers, distributors and re-packers the following products.*

SULFONIC ACID
Alkyl aryl sulfonate
minimum salt content

SLURRY
high salt content
for spray and drum drying

Liquid Detergents
25% and 40% active ingredients

Special products formulated to your specifications
Technical data sheets available upon request

*No sales made to consumers

Write to Box No. 663

SOAP & SANITARY CHEMICALS
254 W. 31st Street New York 1, N. Y

***Tamms* SILICA**
Soft Amorphous Type

Grades to meet various abrasive requirements . . . for all kinds of metal polishes.

***Tamms* TRIPOLI**
Rose and Cream Colors

Once-ground, double-ground and air-float — ideal grades for buffing and polishing. Also rubbing compounds.

Preferred for POLISHES!
Tamms

Tamms products are widely used in the polish trade, preferred for quality results. Write today for prices and samples.

***Tamms* MULTI-CEL**
Diatomaceous Earth

Top grade, ground extremely fine. A milder abrasive than silica. Best for silver polish.

***Tamms* BENTONITE**
(Suspension Medium)

Very finely-ground colloidal clay. Wholly soluble — absorbs 5 times its weight in water.

Dept. RM-3, TAMMS INDUSTRIES, Inc., 228 N. La Salle Street, Chicago 1
Formerly TAMMS SILICA COMPANY

Grieme in New Post

Standard Chlorine Chemical Co. and Standard Naphthalene Products Co., S. Kearny, N. J. recently

HARRY C. GRIEME

announced the appointment of Harry C. Grieme as general sales manager in charge of coordinating the sales of the two corporations and to direct market research activities. Mr. Grieme brings to his new position a broad background in the management and sales fields. He was formerly associated with Chemical Construction Co. and the H. K. Ferguson Co. At the same time, the company announced the completion of an expansion program at its South Kearny plant for the production of orthodichlorobenzene, paradichlorobenzene, and naphthalene.

New Trio Silver Cleaner

A new instant silver cleaner, in powder form, to be sold under the trade name "Amazon", recently was announced by Trio Chemical Works, Inc., Brooklyn, N. Y. One pound of powder makes a gallon and a half of concentrated liquid instant silver cleaner. The product is for use with sterling, silverplate, copper, gold and brass. An additional feature, the company claims, is that the cleaner sanitizes as tarnish is removed.

New Specialties Firm

Southern Chemical Products Co. has recently begun operations in Macon, Ga., and is manufacturing floor waxes, soaps, cleaners and disinfectants under its own name, as well as under private label for the trade. George O. Haskell is president of the company, and Charles Van Doren is secretary and treasurer.

New Insecticide Spec.

A new Federal specification on three types of liquid and space spray was recently issued by the Federal Supply Service of the General Services Administration. The new specification, O-1-551a supersedes O-1-551 dated April 1, 1952. The insecticides covered by this specification are designed to spray in enclosed spaces either directly on flies and mosquitoes or into air in which they are flying.

The three types of insecticides covered are: type 1—pyrethrins and DDT; type 2—allethrin and DDT; and type 3—pyrethrins. The specification provides that the insecticides shall comprise the following ingredient materials in the designated proportions:

Ingredients	*Percent by weight*	
	Minimum	*Maximum*
Type I:		
Pyrethrins	0.08	0.12
Piperonyl butoxide, technical	0.75	0.85
DDT	0.95	1.05
Odor neutralizer	0.04	0.06
Deodorized kerosene	To make 100%	
Type II:		
Allethrin	0.15	0.18
Piperonyl butoxide, technical	0.75	0.85
DDT	0.95	1.05
Odor neutralizer	0.04	0.06
Deodorized kerosene	To make 100%	
Type III:		
Pyrethrins	0.08	0.12
Piperonyl butoxide, technical	0.75	0.85
Odor neutralizer	0.04	0.06
Deodorized kerosene	To make 100%	

MANA Meets in Chicago

A meeting of the Manufacturers' Agents National Association is to be held at the Conrad Hilton Hotel, Chicago, at 6 p.m. on March 21, the day before the start of the four-day convention of the National Sanitary Supply Association. Rates of commission, territories, contracts, and house accounts are scheduled topics for the meeting.

Claude J. Martin, president, Parlee Co., Indianapolis, heads the manufacturers' committee, and E. P. Gilsdorf, San Francisco, heads the agents' committee.

Wojtul Can Co. Sales Head

The appointment of Peter Wojtul to the newly-created post of director of sales and W. K. Neuman

PETER WOJTUL

as general manager of sales, metal division of Continental Can Co., New York, recently was announced by General Lucius D. Clay, chairman of the board. At the same time, the company named Charles B. Stauffacher as control officer and Orren R. McJunkins as general manager, southeastern district of the metal division.

Nuodex Moves Offices

Sales, executive and administrative offices of Nuodex Products Co., recently moved from Elizabeth, N. J. to new quarters at One Virginia Street, Newark, N. J. The mailing address continues to be Elizabeth, N. J. In addition to the sales and order departments, advertising, accounting and purchasing personnel have been transferred to Newark as have been the offices of Donald Roon, marketing vice-president, and Arthur Minich, executive vice-president.

The research laboratories, under the direction of Dr. John R. Skeen, including the technical service laboratories, are being centralized in the Nuodex research building, 1075 Magnolia Ave., Elizabeth. This structure is now in the process of reconstruction. The main Nuodex plant remains at 830 Magnolia Ave., Elizabeth, along with the control laboratory and the offices of Walter Gotham, production vice-president.

If you're looking for something new
and different in **BRUSHES**

See us at

**THE NATIONAL SANITARY SUPPLY ASSOCIATION
CONVENTION AND TRADE SHOW**

Room 139

Conrad Hilton Hotel, Chicago

March 24-25-26

•

ZIMMERMAN BRUSH CO.

900 W. LAKE STREET

Chicago 7, Ill. **TAylor 9-3262**

CLIFTON
Products

**SOAP
DISPENSERS**

SOAPS . . . Liquid . . . Soft

SOAP — Liquid Soap Concentrates
hard water resistant—stays clear when diluted—make your own liquid soap.

DEODORIZING CAKES
DISINFECTANTS . . .
SYNTHETIC DETERGENTS

CLIFTON CHEMICAL CO., Inc.
62 William Street New York 5, N. Y.

Factories:
Front Street, NEW YORK 7, N. Y.
Essex Street, JERSEY CITY, N. J.

Open up NEW AVENUES OF Profit
EXTRA AND REGULAR

*With the Positive
All-Electric Method
of Odor Control*

See **KEYTHOL**
Scent
Conditioner
at the NSSA
Convention
**BOOTH
NO. 27**

KEYSTONE SCENT CONDITIONER CORP.
315 N. 12TH STREET • PHILADELPHIA 7, PA.

Meet all Sanitary Requirements

. . . with these Three Bactericides and Sanitizers. They have been manufactured to comply with the varying Health Department standards thru-out the States.

Increase Sales and Repeat Orders

For Last Tank Rinse

KRYSTYL-T An odorless and tasteless Chloramine-T compound. Active bactericide, germicide, deodorizer and disinfectant. Non-irritating to the hands.

KRYSTYL-EEN A Quaternary Ammonium Sanitizer. Odorless and Tasteless.

KRYSTYL-KLEER
A Chlorinated Bactericide.

All 3 made by the makers of

BURNISHINE

ESTABLISHED 1887

Write for new 1952 Catalog

J. C. PAUL & CO.
8140 N. Ridgeway Ave. Skokie, Ill.

D.C.M.X. . . .

(*From Page* 102)

ties.

In all of the hand-washing tests undertaken to date, the surviving organisms have been found to be essentially the same whether D.C.M.X. or hexachlorophene was used. The subjects taking part in the tests were all classifiable, however, as "light" workers and the researches of Lawrie and Jones[20] confirmed by Lord et al.[21] have shown that hexachlorophene gives its best results on such subjects, much poorer results being obtained when "heavy" outdoor workers are the subjects. Although parallel experiments have not yet been conducted with D.C.M.X. soap it might reasonably be forecast that much improved figures would be obtained since this compound has a much higher activity against gram negative organisms; its gram negative activity is in fact higher than its gram positive, and gram negative organisms are the principal contaminants of the skin of "heavy" workers.

The incorporation of D.C.M.X. into soap presents no problems; the usual practice is to add the finely powdered material during the milling process but the high solubility in perfume compounds, alcohol and other solvents makes it possible to add it as a solution where this method is preferred.

The stability to alkali is exceptional; refluxing for six hours with 20% aqueous caustic soda produces no measurable decomposition, so that free alkali in a soap could have no deleterious effect. In the case of liquid soaps the D.C.M.X. may be brought into solution by heating with a portion of the soap and diluting the resulting liquid with the balance of the soap. Alternatively the material may be added as a solution in the minimum of alcohol, acetone or other solvent.

Other Applications

IN general D.C.M.X. finds application in the pharmaceutical field as a direct replacement for and improvement upon the older phenols and chlorophenols in the many and varied products in which these have been used hitherto. The advantages over these older compounds in the formulation of antiseptic fluids have already been mentioned and similar considerations obtain in the case of ointments, obstetric creams and similar products. The freedom from toxicity and irritant properties makes it possible to employ, in all cases, a quantity of D.C.M.X. at least as great as that of the germicide which it replaces, thus making an increase of from three to eight times in the bactericidal value of the product without increase in the basic cost; alternatively the quantity may be reduced to the point where the germicidal value is equal to that of the original whereby a substantial saving in cost may be effected without loss of efficiency in the finished material.

The high activity of D.C.M.X. against most of the common strains of Staphylococci and Streptococci indicate that it would be a valuable active ingredient for adhesive dressings, particularly those intended for the treatment of boils and similar skin infections.

In those instances where phenols or chlorophenols are used solely as preservatives, reports from users make it quite evident that D.C.M.X. is giving protection far in advance of that afforded by any other such product. Very low concentrations are proving satisfactory in the majority of cases and the range of infective agents against which protection is given is much wider than that covered by alternative materials.

The effectiveness of D.C.M.X. against moulds and fungi has prompted the initiation of clinical trials with ointments and dusting powders for the treatment of such infections as ringworm and athletes foot but no results are available yet.

Toilet preparations of many kinds could benefit from the inclusion of D.C.M.X. in their composition. The necessity for having present an effective germicide in shaving preparations has been stressed by Bryan[22] and the results that were obtained with D.C.M.X. in soap make its value for such a purpose clearly evident. Similar considerations apply to shampoos which, according to Lesser[23] are more likely to have a beneficial effect upon dandruff if a reliable antiseptic agent is present.

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(20) Lawrie & Jones, *Pharm. J.*, 1952, 168, 288.
(21) Lord, Thomas & Parker, ibid, 1952, 169, 161.
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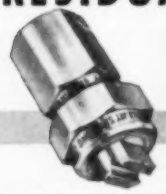
In Carbide Sales Posts

H. D. Hughes recently has been appointed general sales manager and E. E. Fogle, sales manager, of the industrial chemicals division, Carbide and Carbon Corp., New York. Mr. Fogle returns to the company after a seven-month leave of absence as director of the rubber, chemicals, drugs, and fuel division of the OPS.

Both Mr. Hughes and Mr. Fogle are veteran chemical salesmen, Mr. Hughes having joined the sales department of Carbide and Carbon Chemicals Co. in 1928. In his new position, Mr. Hughes co-ordinates the sales activities of the firm's 21 district sales offices. Mr. Fogle joined the company through its research fellowship at Mellon Institute, Pittsburgh, in 1930.

Distribution *makes* the Difference in...

RESIDUAL SPRAYING



SPRAYING SYSTEMS

TeeJet SPRAY NOZZLES

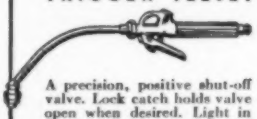
Distribution of liquid particles are very important in residual spraying. TeeJet Spray Nozzles give you uniform distribution over entire pattern area . . . and proper atomization. Available in any capacity, nozzle assembly includes interchangeable orifice tip and strainer. Write for Bulletin 58.

FOR EASIER SPRAYING ON THE JOB

ADJUSTABLE CONEJET

With ¼ turn of tip you have full range choice of spray from finely atomized cone to solid stream. Fits any TeeJet body or Trigger TeeJet. Write for Bulletin No. 63.

TRIGGER TEEJET



A precision, positive shut-off valve. Lock catch holds valve open when desired. Light in weight, comfortable. Supplied with straight or curved extensions. Use with any TeeJet Tip. Write for Data Sheet 4675.

SPRAYING SYSTEMS CO.

Engineers and Manufacturers

3217 RANDOLPH STREET • BELLWOOD, ILLINOIS

- Warfarin bait can be used effectively against all species of rats and mice found in the United States.
- Warfarin bait can be used effectively under all geographical conditions.
- Warfarin bait can be used effectively under all climatic conditions.

WARFARIN DOES THE JOB!

In warfarin bait the pest control operator has the complete rat and mouse killer. Pre-baiting is unnecessary, "bait-shyness" is non-existent. Permanent bait stations, replenished periodically, provide excellent control of new invaders. Your technical questions about the professional use of warfarin bait will be answered promptly.

WISCONSIN ALUMNI RESEARCH FOUNDATION

P.O.BOX 2059 - MADISON 1, WIS.

Old Empire

Don't Gamble with New Items

Avoid unnecessary costs and equipment investment. Charges below your own overhead made possible by specialization.

- SHAVE CREAMS
- CASTILE SHAMPOO
- TOOTH PASTE
- CREAM SHAMPOO
- DEODORANTS
- PHARMACEUTICALS
- PINE DISINFECTANT
- INDUSTRIALS
- ALCOHOLIC PREPARATIONS

AUTOMATIC EQUIPMENT HANDLING

Bottles • Jars • Collapsible Tubes

Please notice: All equipment — including soap crutchers and freezing tanks — is stainless steel.

OLD EMPIRE MFG. CHEMISTS, INC.

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HUmboldt 4-2121

Lancaster, Allwine & Rommel

Registered Patent Attorneys

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815 - 15th STREET, N. W.

Washington 5, D. C.

Practice before U. S. Patent Office. Validity and Infringement Investigations and Opinions.

Booklet and form "Evidence of Conception" forwarded upon request.

SEIL, PUTT & RUSBY, INC.

Analytical and Research Chemists

For over thirty years we have specialized in the analysis of pyrethrum, rotenone and other

ORGANIC INSECTICIDES

It has been our privilege to make many analyses for government agencies and most leading importers and manufacturers in the insecticide field.

We are also making frequent analyses of the synthetic insecticides, such as D.D.T., B.H.C., Chlordane, Toxaphene, Heptachlor, Allethrin, etc., etc.

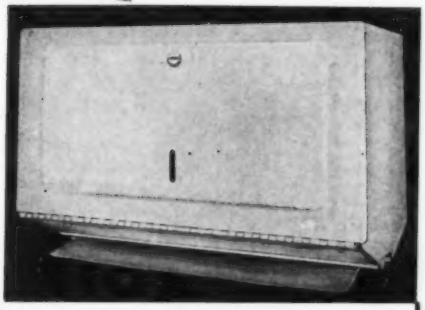
Consultation without obligation

16 East 34th Street, New York 16, N. Y. • *Phone:* MU 3-6368

FLASH!... CASH IN

on

DASH METAL TISSUE & TOWEL DISPENSER



- Single and double fold cabinets
- Snap-lock, heavy gauge steel
- Green or white baked enamel and chrome finishes
- Guaranteed against breakage or faulty construction

See Our **BOOTH NO. 73** at National Sanitary Supply Convention and Display Conrad Hilton Hotel, Chicago, March 22 to 25.

AVAILABLE IMMEDIATELY!

Write today for free brochure on all DASH Dispensers.

DASH METAL PRODUCTS

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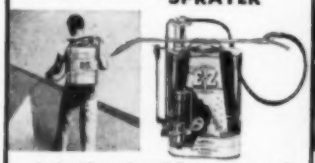

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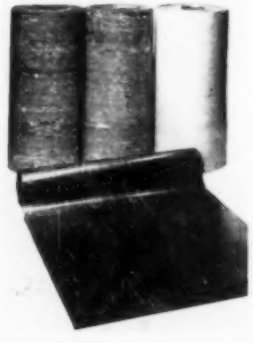

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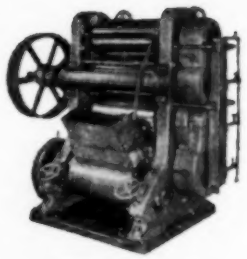

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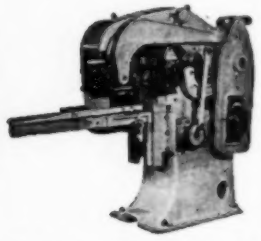

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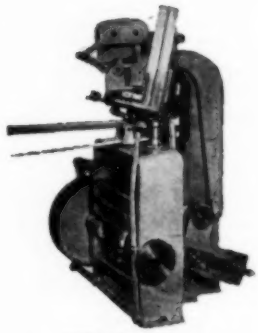

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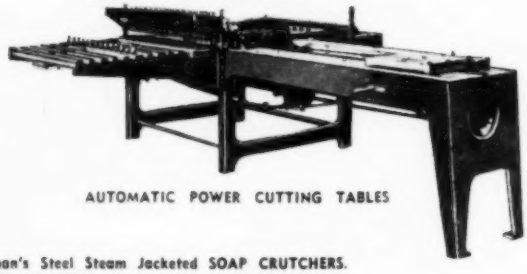

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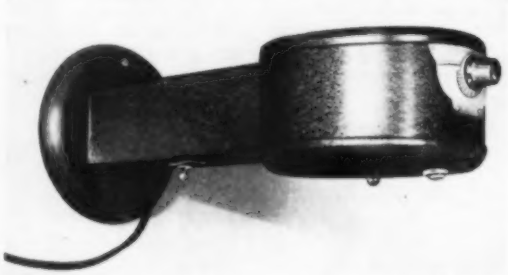

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For Sale: Toilet bowl cleaner, sodium bi-sulphate 20-22 oz. cans. Special price $1.50 dz. cans. Bleaching powder, 40 and 100 lb. drums. 8c lb. (chloride of lime). Address Box 710, c/o *Soap*.

For Sale: 1500 & 3000# soap crutchers; wrapper type S; P & S rolls; 3 & 5 roll mills; 10" plodder; Pdr. mixers; Fillers; Dryer: Boilers: other items. I. E. Newman, 5602 Blackstone Ave., Chicago, Ill.

For Sale: Proctor & Schwartz 6-Fan automatic soap chip dryer, 2-roll chilling unit, large roll 48" dia. Empire State foot presses. Soap frames. Allbright-Nell 4' x 9' chilling rolls. Blanchard #14 soap powder mill. Lehmann 4-roll W. C. 12" x 36" steel mill Houchin 8½" x 16" 3-roll and 18" x 30" 4-roll Granite Stone Mills. Kettles and tanks, iron, copper, aluminum and stainless. Dryers vac. & atmos. Jones automatic soap presses. Slabbers and cutting tables, hand & power. Crutchers. Six-knife chipper. Filter presses 12" x 42". Wrapping & sealing machines. Powder, paste & liquid mixers. Rotex sifters. Filling machines, Grinders, Hammer mills. Colloid mills. Three-roll steel mills 8" x 22" to 16" x 40". Portable elec. agitators, pumps, etc. Send for bulletin. We buy your surplus equipment. Stein Equipment Company, 107—8th St., Brooklyn 15, N. Y. STerling 8-1944.

All subscriptions to SOAP & SANITARY CHEMICALS entered or renewed at this time include a copy of the 1953 SOAP BLUE BOOK & Catalog, the 280 page buyers' guide, out March 25. Yearly subscription, U. S. $4.00; Canadian & Pan American, $5.00; all others $6.00.

Announcement — Completely new, up-to-date book, SANITARY CHEMICALS by Schwarcz ready for sale April 15. 576 pages.

For Sale: Reprints of "Synthetic Detergents Up-to-Date" II (Newest Revision) now available . . . 44 pages listing over 1000 detergent products by trade name, manufacturer, class, type, formula and uses—price $1.50. Remittances must accompany order. Available direct from author. John W. McCutcheon, 475 Fifth Avenue, New York 17, N. Y.

Standard Reference Books:
See page 140

Ocean Queen . . .

(*From Page* 49)

tors come aboard to insure thorough sanitation above and below decks, but less need is found here than aboard other ships. Disinfectants are used with caution because the odor would easily disseminate throughout the vessel.

A permanent trolley arrangement for window cleaning of the all-weather promenade deck is a feature of the liner, and has been used on other ships, including the *America*. Landlubbers have probably seen it on the United Nations' and Lever Brothers' buildings, but the U. S. Lines can claim an earlier use of the permanent trolley. Fresh water spray, followed by a rub-down with a squeegee is used on the windows while at sea, and "Glass Wax" is generally applied when cleaning windows at the dock.

Steward Handles Cleaning

THE Steward's Department has complete charge of all cleaning operations in passenger areas. The room stewards do the work done by chamber maids in hotels; they make up the beds and clean the bathrooms, and give room service where requested. They are assisted by the stewardesses, who take care of dusting and light cleaning, but who chiefly assist in catering to the whims of the female passengers.

Stewards are also assigned to each public room, 26 in all. There are smokeroom stewards, lounge stewards, library and writing room stewards; as well as stewards for public washrooms. The public bathrooms in Tourist class maintain showers or tubs, and wash basins with liquid soap dispensers.

All rooms are cleaned daily, whether they are luxurious suites or modest Tourist class. Linens are changed and towels furnished, while face and hand soap is renewed daily as needed.

The company keeps an average of 500 cases of toilet soap in storage. The cakes are of one and two ounce variety, and come in three gross lots to a case. Also stored in large quantities is brown soap, used in galleys for scrubbing down. Brown soap is used for heavy scrubbing in the galleys. It is made up into a "sougee" by adding a detergent to a bucket of hot water.

Purchasing of supplies is in charge of Van Courtlandt Short. Salesmen may also contact Mr. Kocher, an open-minded friendly man who tries out many of the products and puts them through stringent tests right on the spot to see whether they will do the things the salesman claims. Until something better comes along, however, standard items, used successfully over many years on several ships, are now in general use aboard the *United States*.

Mr. Kocher sometimes finds it hard to determine the differences in detergents, but makes a practice of checking with crew members for their reactions as to efficiency and desirability of soap products. A more scientific analysis of product performance is difficult, but Mr. Kocher says he is always interested in detergents that will do a better job.

Is Product Safe?

IN purchasing soaps or detergents for cleaning, the first question Mr. Kocher asks is whether the product is injurious to the hands or face. Anything marked "poison" or otherwise hazardous is quickly rejected for use aboard ship. The reason, of course, is that spillage is a hazard. The damaging effects of such products in the eye, or on hands, can cause injury to crew members.

Since demands for power are enormous, all engine room equipment embodies the latest design. In the modern engine rooms of the *United States*, there is little noise and virtually no grease or dirt. Engine care is largely handled mechanically and standard uniform for engineers is immaculate white overalls. The engine room has a diamond pattern non-skid aluminum floor on which a granulated soap of a household type is used in a light solution for cleaning. Sixteen crewmen, or "wipers," as they are known below decks, have the task of cleaning decks and bulkheads.

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emergency, the liner carries two of everything needed to run the ship. The electric systems include standby generators, standby storage batteries and a completely separate emergency power and distribution system. Powered by high pressure, high temperature steam turbines, the total output of her boilers is several times that of the next most powerful American liner. Although some of her unique features are secret, she has been designed to be readily convertible into a crack military transport.

For those of you who like to take a peek at the bridge, here is a preview of what the liner commands: Two radar units enable the bridge to "see" ahead in dark or fog. Echo depth sounder equipment—which bounces sound waves against the ocean floor—allows for instant reading of soundings. The large streamlined wheelhouse, which is flanked by the wide aluminum wings of the outer bridge has duplicate equipment for practically every navigational chore. Changeover from one unit or system to the standby can be made quickly. The wheels which actually steer the giant liner are small—there are two of them, both power controlled. A new electronic version of "Metal Mike" automatic steering device will maintain perfect precision in holding course or changing to a new one. The wheelhouse is equipped with a battery of its own operational telephones, a public address system, and also "sound powered" telephones. These last assure instant direct communication with the engine room at all times since they require no mechanical or electrical assistance. There are several complete communication systems aboard the *United States* and 750 telephones, any one of which may be connected for a call home or overseas.

The liner *United States* is like a complete, self-contained city, with power and comfort and sanitary provisions; and, as in any city, men are needed who know how to supervise housekeeping and cleaning operations. It's a good ship, a clean ship, and one in which all Americans can take great pride.

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Tale Ends

THE lady scrubbed the couch with an upholstery cleaner. Her husband thereafter lay down on the aforementioned couch to watch television, says the report, and when he arose the hair on the back of his head fell out. That was his story. Without further ado, the gent in question blamed his mishap on the upholstery cleaner, screamed for a lawyer and entered suit for $10,000 damages against both the maker of the stuff and the chain market where his wife had bought it. What other circumstances might have been involved, the jury will never know. Logic or justice of the claim? Don't be funny! How much shall we give "this poor fellow?"

* * *

How dumb can fish get? Thus comments Jim Wheeler, Sr., prez of Essential Chemicals of Milwaukee when he sent us a clipping recently about how the charter fishing boats in Florida were having a hard, lean season. The boat owners, says the news item, are resorting to catching catfish with set lines using soap for bait. Why soap, the report didn't say,—just said they trick the poor old catfish, skin him and sell him to the swanky joints to make filet de sole bonne feline. Add one more to the list of non-detergent uses for soap.

* * *

"It's smart to keep clean." That's the new slogan of the cleanliness promotion division of the Soap Assn. (also known as the AASGP) which is being used all over in behalf of cleanliness. It's short, snappy and to the point. But we worry a little about interpretation of the word, "smart." According to our old pal, Webster, it might mean clever, witty, superior, stylish, fashionable, keen, shrewd, a stinging sensation or poignant mental suffering. Take your pick,—but don't forget to keep clean. Withal a good slogan!

* * *

Shades of the old school tie! In England, soap salesmen for Hedley have been wearing strikingly gaudy neckties of late, all of a standard pattern, wide vivid red and white diagonal stripes. The dazzling neck adornment is intended as a publicity stunt in behalf of Hedley's "Daz." The ties are known as H.M.S.D. which when carefully decoded spells out "Hedley Men Selling Soap." From comments of observers, we hope that this threat does not cross the ocean to America. Its possibilities are legion. The stunt also bears out something we have long suspected,—you don't have to be completely goofy to sell soap, but it does seem to help!

* * *

A tip of the hat to John Wanamaker, N. Y. department store, which last month staged a "Chemical Carnival" accompanied by double-page advertising spreads in the newspapers featuring every sort of cleaner, polish, insecticide, deodorant, floor wax, etc., used in home or industry. It was a big sales push for the full line of soaps, cleansers and other sanitary chemical products in a leading department store with which the industry should be delighted. Already, Chemical Specialties Mfrs. Assn. is on the job to help the idea catch on in other cities. Story about the Wanamaker "carnival" elsewhere in this issue.

* * *

Seems that some releases concerning the moth proofing material, EQ-53, sent out by the Bureau of Entomology and Plant Quarantine, were a trifle premature and misleading to some eager-beavers in the industry. The labeling information which was given in the releases was only *suggested labeling* and not an officially approved label to be used willy-nilly on this type of product. In this connection, the Chemical Specialties Manufacturers Assn. warned its members that all products of this kind must be registered with the USDA (Production and Marketing Administration), and in all states requiring registration, and with the N. Y. City Fire Dept., the latter taking a special label. So be warned, Mr. Insecticide Packer!

* * *

The newest MacNair-Dorland book, "Sanitary Chemicals" by the late Leonard Schwarcz will be available early next month. Mr. Schwarcz wrote a book ten years ago in similar vein called "Sanitary Products." But the new volume, a completely new book, runs 576 pages while the old one was only 290 pages. And that's just about the way the sanitary chemical industry has expanded in ten years. Unfortunately, Leonard Schwarcz died with the new book only partly written. Other leaders in the industry took up where he had left off and helped finish the job. It's a practical book for the practical man. Very little high-brow stuff.

Flip—or flop?

COULD be either,—like advertising. Good advertising in the **right place** rarely misses. For example, if you want complete coverage of the **entire** sanitary chemical, janitor supply, soap, detergent, floor wax, insecticide, disinfectant, polish and accessory markets, consider the full possibilities of the 6,000 ABC circulation of

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